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U.S. Nuclear Regulatory Commission  
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Washington, D.C. 20555-0001

Braidwood Station, Unit 1 Facility Operating License Number NPF-72  
NRC Docket Number STN 50-456

Subject: Request for Notice of Enforcement Discretion for  
Technical Specification 3.5.2, "Emergency Core Cooling Systems -  
Operating"

The purpose of this letter is to provide written follow-up to our request for a Notice of Enforcement Discretion (NOED) from compliance with Braidwood Station, Unit 1, Technical Specification (TS) 3.5.2, "Emergency Core Cooling Systems - Operating," Condition A. Condition A requires that with one ECCS train inoperable in Modes 1, 2, and 3, restore the ECCS train to operable status within seven days. If this Required Action and associated Completion Time cannot be met, Condition C requires that the affected Unit be in Mode 3 within six hours and Mode 4 within 12 hours. This NOED request was discussed with representatives of the NRC on February 2, 2003, and verbal approval was granted at approximately 1250 hours on February 2, 2003.

On January 26, 2003 at 2200 hours Braidwood Station, Unit 1 entered TS Limiting Condition for Operation (LCO) 3.5.2 Condition A for planned maintenance on the Unit 1 B (1B) Residual Heat Removal (RHR) pump. The planned work window for the 1B RHR pump included numerous routine surveillance and preventive maintenance activities. However, the primary activity in the work window was to inspect the 1B RHR pump internals and replace the stuffing box extension as follow-up actions from a station operability determination and lessons learned from a previous 2B RHR pump repair. There were no known performance issues with the pump prior to the work window.

The work window was planned for a scheduled duration of four days and 17 hours. Thus, TS LCO 3.5.2 was expected to be exited on January 31, 2003 at 1500 hours. Unforeseen difficulties encountered during the pump reassembly process have delayed returning the 1B RHR pump and thus the 1B train of ECCS to operable status. The current repair efforts and subsequent post maintenance testing activities are scheduled to be completed on February 3, 2003 at 1100 hour which exceeds the allowed seven day Completion Time that expires on February 2, 2003 at 2200 hours. Enforcement discretion is requested to extend the Completion Time of TS 3.5.2 Condition A for an additional 20 hours to allow continued operation of Braidwood Station, Unit 1 with the 1B RHR pump inoperable and thus the 1B train of ECCS inoperable. If at any time it

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becomes apparent that completion of the work on the 1B RHR pump will be significantly delayed or if significant problems are discovered with the pump, management will terminate the time extension and comply with the action requirements. Also, if the 1B train of ECCS is restored to operable status prior to the expiration of the Completion Time of TS 3.5.2 Condition A, we will notify the NRC that the NOED is no longer needed.

As committed to during the February 2, 2003 teleconference, this letter provides the written follow-up NOED request.

The enclosure provides the following information necessary for approval of the requested enforcement discretion.

1. The TS or other license conditions that will be violated.
2. The circumstances surrounding the situation, including apparent root causes, the need for prompt action and identification of any relevant historical events.
3. The safety basis for the request, including an evaluation of the safety significance and potential consequences of the proposed course of action.
4. The justification for the duration of the noncompliance.
5. The basis for the conclusion that the noncompliance will not be of potential detriment to the public health and safety and that no significant hazard consideration is involved.
6. The basis for the conclusion that the noncompliance will not involve adverse consequences to the environment.
7. Any proposed compensatory measures(s).
8. A statement that the request has been approved by the Plant Operations Review Committee.
9. Which of the NUREG-1600, "General Statement of Policy and Procedures for NRC Enforcement Action," criteria specified in Section B is satisfied and how.
10. If a follow-up license amendment is required, both the written NOED request and the license amendment request must be submitted within two working days. Not Applicable.
11. Specific NUREG-1600 criteria for NOEDs involving severe weather or other natural events. Not applicable.

As previously noted, this information was verbally transmitted to representatives of the NRC on February 2, 2003, at 1100 hours, with subsequent approval being verbally granted by the NRC at 1250 hours.

As discussed during the teleconference, the issues associated with the planning and execution of this work window, including the balancing of online and outage maintenance, have been entered into the corrective action program. The lessons learned will be communicated to the other Exelon Generation Company nuclear plants.

Please address any comments or questions regarding this matter to Amy Ferko, Braidwood Station Regulatory Assurance Manager, at (815) 417-2699.

Respectfully,

A handwritten signature in black ink, appearing to read "T. R. von Suskil" with a stylized flourish at the end.

James D. von Suskil  
Site Vice President  
Braidwood Station

Enclosure: Request for Notice of Enforcement Discretion for Technical Specification  
3.5.2, "Emergency Core Cooling System (ECCS)- Operating"

cc: Regional Administrator – NRC Region III  
NRC Senior Resident Inspector – Braidwood Station

bcc: Project Manager, NRR – Braidwood Station  
Manager of Energy Practice  
Office of Nuclear Facility Safety – Illinois Department of Nuclear Safety  
Site Vice President – Braidwood Station  
Regulatory Assurance Manager - Braidwood Station  
Director, Licensing – Mid-West Regional Operating Group  
Manager, Licensing – Braidwood and Byron Stations  
Nuclear Licensing Administrator – Braidwood Station  
EGC Document Control Desk Licensing (Hard Copy)  
EGC Document Control Desk Licensing (Electronic Copy)

**ENCLOSURE**

**BRAIDWOOD STATION, UNIT 1  
FACILITY OPERATING LICENSE NO. NPF-72**

**Request for Enforcement Discretion for  
Technical Specification 3.5.2, ECCS - Operating**

**Request for Enforcement Discretion for  
Technical Specification (TS) 3.5.2, "ECCS-Operating"**

**1.0 The TS or other license condition that will be violated.**

Exelon Generation Company, LLC (EGC), Braidwood Station Unit 1, is requesting enforcement discretion from compliance with Technical Specification (TS) 3.5.2, "Emergency Core Cooling System (ECCS) – Operating," Condition A. Condition A requires that with one ECCS train inoperable in Modes 1, 2, and 3, restore the ECCS train to operable status within seven days. If this Required Action and associated Completion Time cannot be met, Condition C requires that the affected Unit be in Mode 3 within six hours and Mode 4 within 12 hours.

The ECCS consists of three separate subsystems: Centrifugal Charging (CV) (high head), Safety Injection (SI) (intermediate head), and Residual Heat Removal (RHR) (low head). Each subsystem consists of two redundant, 100% capacity trains. Each ECCS train includes the piping, instruments, and controls required to ensure an operable flow path capable of taking suction from the Refueling Water Storage Tank (RWST) upon an SI signal and automatically transferring suction to the containment sump.

With one ECCS train inoperable, 100% of the required ECCS flow is provided by the remaining operable ECCS train. Condition A requires that the inoperable train be restored to operable status within seven days. The seven day Completion Time is based on a probabilistic risk assessment evaluation that concludes that the Completion Time does not significantly affect the overall probability of core damage. The basis for this conclusion is documented in WCAP-10526, "Byron Generating Station Limiting Conditions for Operation Relaxation Program," dated April 1984. Given the similarities between Byron and Braidwood, the conclusions of WCAP-10526 were considered applicable to Braidwood Station.

If an inoperable train cannot be returned to operable status within this seven day Completion Time, Required Action C requires the unit to be brought to Mode 3 within six hours and Mode 4 within 12 hours. This Completion Time is reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging plant systems.

**2.0 The circumstances surrounding the situation, including root causes, the need for prompt action and identification of any relevant historical events.**

On January 26, 2003 at 2200 hours Braidwood Station, Unit 1 entered TS Limiting Condition for Operation (LCO) 3.5.2 Condition A for planned maintenance on the Unit 1 B (1B) RHR pump. The seven day Completion Time to restore the 1B ECCS train to operable status will expire at 2200 hours on February 2, 2003.

Planned maintenance on the 1B RHR pump began on January 26, 2003 at 2200 hours. The planned work window for the 1B RHR pump included numerous routine surveillance and preventive maintenance (PM) activities. The activities included maintenance activities associated with the 1B RHR pump, such as: repairing a leak on the seal cooler, replacing the stuffing box extension, inspecting the 1B RHR pump internals, changing

the oil, and meggering the motor. Other scheduled maintenance activities for this work window included performing breaker PMs on various RHR system valves, performing an actuator overhaul of the 1B RHR pump minimum flow valve (i.e., 1RH611), and repairing a status light and stroking the 1B containment sump recirculation suction valve (i.e., SI8811B). However, the primary activity in the work window was to inspect the 1B RHR pump internals and replace the stuffing box extension as follow-up actions from a station operability determination and lessons learned from a previous 2B RHR pump repair. There were no performance issues with the 1B RHR pump prior to the work window and it had been satisfactorily meeting all surveillance requirements. The Original Equipment Manufacturer (OEM) was contracted to provide onsite support for the repair to provide technical assistance and facilitate resolution of emergent issues.

The work window was planned for a scheduled duration of four days and 17 hours. Lessons learned from past maintenance activities were taken into consideration when planning the work window. Since 1RH611 is required to be isolated to support maintenance on the 1B RHR pump, the actuator was required to be installed. Efforts were made to reduce the duration of the work window by replacing the actuator for 1RH611 with a spare, but a spare actuator was not available. Past experience has shown that removing the impeller from the pump shaft is a difficult step in RHR pump disassembly. The work plan allowed for a duration of eight hours to remove the impeller from the shaft. If the impeller could not be removed within eight hours, the pump would be reassembled and returned to service. This was expected to ensure completion of the 1B RHR work window within the allowed Completion Time of TS 3.5.2 Condition A. Based on this strategy, TS LCO 3.5.2 was entered to support maintenance of 1RH611 at 2200 hours on January 26, 2003. This was followed by entry into TS LCO 3.6.6, "Containment Spray and Cooling Systems," at 1856 hours on January 27, 2003 when the common suction header was isolated.

TS LCO 3.5.2 was expected to be exited on January 31, 2003 at 1500 hours. However, unforeseen difficulties encountered during the pump reassembly process have delayed returning the 1B RHR pump and thus the 1B train of ECCS to operable status. The current repair efforts and subsequent post maintenance testing activities are scheduled to be completed on February 3, 2003 at 1100 hours which exceeds the allowed seven day Completion Time. Failure to complete the work as scheduled has been entered into the corrective action program.

Inspection of the 1B RHR pump internals was required for the following two reasons:

1. Verify the diffuser anti-rotation pin is installed, and
2. Measure the stuffing box extension (SBE) clearances.

In order to perform the above inspections, the 1B RHR pump was disassembled. Numerous minor issues and delays, including emergent radiation protection issues of personnel dose and contamination control, that could have been avoided were encountered during the pump disassembly. The emergent radiation protection issues were entered into the corrective action program. The work window was approximately eight hours behind schedule at the time pump reassembly was scheduled to commence.

During inspection of the 1B RHR pump internals, it was discovered that the as-found SBE measurements were not within specification. A new SBE and reconditioned motor support plate were planned replacements. During subsequent pump casing

measurements, the first unforeseen difficulty was encountered. The inner diameter (ID) of the pump casing at the location where the SBE mounts to the pump was found to be out-of-round to the extent where the replacement SBE could not be installed. This out-of-round condition had been seen to a minor extent on a previous occasion. However, the extent of this condition on the 1B RHR pump had not been previously seen. The pump casing required dressing to restore the pump casing ID dimensions to within specification tolerances. Discovery of the out-of-round condition on the 1B RHR pump casing was entered into the corrective action program. The work to restore the pump casing ID to within specification resulted in an unforeseen delay of 11.5 hours.

Shortly after the pump casing tolerance work was started, an eight hour delay was encountered to satisfactorily resolve a safety concern associated with performing work under a suspended load. Due to space constraints the motor is suspended during assembly/disassembly. A safety concern was previously identified in the post job critique of lessons learned from previous maintenance performed on the 2B RHR pump. The safety rules regarding work under suspended loads have not changed since performing maintenance on the 2B RHR pump in November 2001. To address the concern previously identified and improve the safety factor for workers performing work under the load, two methods of securing the load were implemented during maintenance activities associated with the 1B RHR pump. However, a safety concern was identified with the second method employed for securing the load. Further enhancements to the second method of securing the suspended load were made to satisfactorily resolve the safety concern. It took approximately eight hours to resolve the safety concern. The safety issue was entered into the corrective action program.

A second unforeseen delay was encountered when, during the assembly process, it was determined that the overall replacement motor support assembly concentricity did not meet procedural requirements. This was not a foreseeable condition in that the motor support assembly was reconditioned and expected to fit. Resolving this issue resulted in an additional delay of six hours.

During the initial assembly of the 1B RHR pump internals, the impeller was installed and found to exceed required impeller total indicated runout values. The 1B RHR pump impeller was removed and installed in a lathe to measure any difference between the centerline bore and the skirt outer diameter. The manufacturer's representative was consulted and recommended machining the lower skirt diameter to remove the runout condition. The machining was performed with the field representative in attendance. After the lower skirt area was machined, the runout was measured and found to be acceptable ensuring that the inner bore was concentric with the lower skirt. During this time the motor shaft was also measured for runout and found to be within tolerance. Subsequently, the 1B RHR impeller was installed on the motor shaft and found to have a runout value greater than the original readings taken. The 1B RHR pump impeller was removed, cleaned, reinstalled and checked again with no change. The manufacturer's representative reviewed the data and suggested that a rebuilt impeller be installed on a mandrel to check it for concentricity. It was decided to use a rebuilt impeller due to the fact that any further machining of the original impeller would place it outside of the required clearance specification. The rebuilt impeller was found to be within required runout values and accepted for installation. The rebuilt impeller was installed on the motor shaft and found to initially exceed required runout values. Further inspection of the motor shaft led to a replacement of the shaft sleeve. The combination of the rebuilt impeller and the new shaft sleeve reduced the total indicated runout to within the



required specification. The unanticipated problems with the pump impeller runout resulted in an additional delay of approximately 34 hours. The issues associated with the pump assembly difficulties were entered into the corrective action program.

The time used to address the unforeseeable issues of pump casing out-of-round, motor support concentricity, and impeller runout problems, coupled with the time to complete the remaining operability testing, will exceed the 7 day allowed Completion Time for restoring an inoperable ECCS train.

The number of issues encountered during this 1B RHR pump work window that resulted in a significant amount of work to resolve were not anticipated based on previous RHR pump disassembly work at Braidwood Station.

Historically, the 1B RHR pump performance has been acceptable. The primary purpose of the 1B RHR pump work window was to verify issues that caused the failure of the 2B RHR pump on November 7, 2001 were addressed to ensure future reliability of the 1B RHR pump. These issues were evaluated and determined not to have affected past operability of the 1B RHR pump.

We are requesting enforcement discretion from the Completion Time of TS 3.5.2 Condition A to allow an additional 20 hours to complete the required repairs, post maintenance testing and evaluation required to declare the 1B RHR pump and thus the 1B ECCS train operable.

Without enforcement discretion, at 2200 on February 2, 2003, Braidwood Station, Unit 1, will be required to shutdown in accordance with TS 3.5.2 Condition C.

### **3.0 The safety basis for the request, including an evaluation of the safety significance and potential consequences of the proposed course of action.**

We are requesting a Regional Notice of Enforcement Discretion (NOED) from compliance with TS 3.5.2 be approved in order to continue operation of Braidwood Station, Unit 1 to avoid cycling the unit through a thermal transient. The integrity of the reactor vessel and other components of the Reactor Coolant System (RCS) can be adversely affected by the number of thermal transients they are subjected to during their lifetime. As each additional thermal transient can affect this integrity, it is prudent to avoid such transients provided the health and safety of the public is preserved. Relief is requested from the Completion Time in TS 3.5.2, Condition A. Braidwood Station, Unit 1 is currently operating in Mode 1, "Power Operation." A one-time, 20 hour extension to the Completion Time is proposed to allow the 1B ECCS train to be returned to operable status.

The ECCS is designed to cool the reactor core and provide shutdown capability following the initiation of certain accidents. It is designed to tolerate a single active failure in the short term or a single active or passive failure in the long term.

The ECCS is designed such that a minimum of three safety injection accumulators, one CV pump, one SI pump and one RHR pump together will ensure adequate core cooling in the event of a design basis loss of coolant accident (LOCA). There are three phases

of ECCS operation during LOCA recovery: injection, cold leg recirculation and hot leg recirculation.

During the injection phase of LOCA recovery, a single suction header supplies water from the RWST to the ECCS pumps. Separate piping supplies each subsystem and each train within the subsystem. The discharge from the CV pumps combines prior to dividing into four supply lines, each of which feeds the injection line to one RCS cold leg. The discharge from the SI and RHR pumps divides and feeds an injection line to each of the RCS cold legs.

During the recirculation phase of LOCA recovery, RHR pump suction is transferred to the containment sump. The RHR pumps then supply the other ECCS pumps.

There are minimal safety consequences associated with this request. Granting of enforcement discretion will not have any significant adverse safety impact because the three subsystems of the Unit 1A ECCS train along with the four safety injection accumulators are operable. These components are all currently in the 10 CFR 50.65 "Requirements for monitoring the effectiveness of maintenance at nuclear power plants" a(2) category and have had no functional failures in the last two years. This indicates they are meeting very stringent reliability and availability criteria. Additionally, Technical Specification Surveillance, 1BwOSR 3.5.2.2-2, "Unit One ECCS Venting and Valve Alignment Surveillance" was performed prior to the expiration of the LCO. This ensures that the 1A ECCS train is properly aligned and full of water. Further, the 1B CV and 1B SI pumps are operable and capable of performing their functions, thus providing additional assurance that the ECCS function is preserved.

For this extension of the Completion Time to be significant an accident situation requiring an ECCS injection would have to occur and the failure of the 1A RHR pump would have to also occur. The likelihood of occurrence of this scenario during this short extension request is minimal.

The risk associated with continued operation beyond the current seven day Completion Time for an additional 20 hours was evaluated. The evaluation accounted for the unavailability of all other components expected to be concurrently unavailable based on the current work schedule, and considers non-quantifiable compensatory measures described in Section 7.0 of this request.

Currently, the 1B Containment Spray (CS) pump is inoperable in support of maintenance activities associated with the 1B RHR pump work activities. TS LCO 3.6.6, "Containment Spray and Cooling Systems," was entered on January 27, 2003 at 1856 hours when the common suction header was isolated. The CS system is considered, but not credited, in the risk assessment and, thus, has no impact on the net radiological risk increase. The requested one-time extension of 20 hours for Condition A of TS 3.5.2 will not result in exceeding the Completion Time associated with the Conditions and Required Actions of TS 3.6.6.

A risk assessment has been performed, and it concludes that there is no net radiological risk increase as a result of extending the Completion Time by 20 hours. This is based on the quantitative risk assessment which concluded that the impact on risk associated with continued operation beyond the current Completion Time of seven days for an additional 20 hours is small and is not risk significant in comparison with the acceptance

criteria stated in the Electric Power Research Institute "PSA Applications Guide." In addition, this risk is less than the risk associated with shutting the unit down when the 1B RHR pump is unavailable. In determining the risk associated with a plant shutdown, the conditional core damage probability (CCDP) associated with a reactor trip was used. It is recognized that there are significant factors that would make this CCDP overestimate the risk from a plant shutdown. To compensate for this, the basic events associated with the following actions were set to FALSE:

1. All operation action human error probabilities,
2. Failure of the motor driven Auxiliary Feedwater pump to start, and
3. The probability that the pressurizer power operated relief valves (PORVs) are challenged.

These modifications to the model were made to compensate for the differences between a reactor trip and a planned shutdown, specifically, better planning, increased staffing levels, and additional time available for recovery actions. Based on a comparison of the risk associated with continued operation with the 1B RHR pump unavailable and the risk associated with a unit shutdown, continued operation for an additional 48 hours can be justified because the calculated risk of a plant shutdown exceeds the risk of operating with the 1B RHR pump unavailable. This includes a factor of five margin to account for other factors, such as, potential changes to success criteria for "bleed and feed" that were not included in the quantification of shutdown risk.

Additional non-quantifiable risk savings are achieved by avoiding shutdown risk with the 1B RHR pump unavailable and the risk associated with power escalation. Finally, the non-quantifiable compensatory actions described in Section 7.0 of this NOED Request provide a reduction in risk. The interaction between the compensatory measures and the non-quantitative risk savings are as follows:

1. Identification of protected equipment minimizes the probability that other equipment may become unintentionally unavailable, thus placing the plant at higher risk. The protected equipment list was derived using the Braidwood Station Probabilistic Risk Assessment (PRA) model to identify those components that would substantially elevate risk if they became unavailable in combination with the 1B RHR pump. Risk is further reduced by re-scheduling surveillances and planned work activity that result in equipment unavailability.
2. Specific Auxiliary Building Floodwatch Walkdowns are established to promptly identify and correct significant pipe leaks that may be precursors to a large flood event in the Auxiliary Building. This compensatory measure was established based on significant contribution of Auxiliary Building Flooding to Core Damage Frequency (CDF) at Braidwood Station.
3. Ensuring that severe weather is unlikely minimizes the likelihood of an extended loss of offsite power while the 1B RHR pump is unavailable, thus reducing the risk of core damage due to an extended Station Blackout event.
4. Preventing the performance of high risk activities and work in the switchyard reduces the likelihood of a reactor trip with the potential for requiring the remaining RHR pump for shutdown cooling
5. Maintaining the 1B AF Pump Day Tank level at greater than 80% increases the time available for the pump to run without the need to refill the day tank. This improves the likelihood of recovery of offsite power following a Station Blackout event.

The analysis used to support the one-time extension of 20 hours for Condition A of TS 3.5.2 was based on an upgraded PRA model of the Braidwood Station. The analysis calculates an Incremental Conditional Core Damage Probability (ICCDP) for the requested one-time extension. As discussed previously, WCAP-10526 documents the basis for the current seven day Completion Time for restoring an inoperable ECCS train and concludes that the seven day Completion Time does not significantly affect the overall probability of core damage. WCAP-10526 calculates an increase in average CDF. A one-time extension of 20 hours does not significantly impact the long term average pump unavailability as most maintenance activities that result in entry into Condition TS 3.5.2 are completed in significantly less time than the 7 day completion time. As such, the analysis used to support the one-time extension of 20 hours for restoring an inoperable ECCS train does not contradict the conclusion of WCAP-10526.

#### **4.0 The justification for the duration of the noncompliance.**

The current schedule to complete the repairs, post maintenance testing and engineering evaluation of the test results needed to declare the pump operable is February 3, 2003 at 1100 hours. Accordingly, we are requesting an additional 20 hours to complete these activities with margin to account for minor difficulties that may be encountered during restoration. We have determined that there is a minimal safety consequence in extending the Completion Time an additional 20 hours for restoring an ECCS train to operable status.

#### **5.0 The basis for the licensee's conclusion that the noncompliance will not be of potential detriment to the public health and safety and that no significant hazard consideration is involved.**

Braidwood Station has evaluated the proposed request and determined that it involves no significant hazards considerations. According to 10 CFR 50.92(c), the request involves no significant hazards considerations if operation of the facility in accordance with the request for enforcement discretion would not:

- A. Involve a significant increase in the probability or consequences of any accident previously evaluated; or
  - B. Create the possibility of a new or different kind of accident from any accident previously evaluated; or
  - C. Involve a significant reduction in a margin of safety.
- A. The request for enforcement discretion does not involve a significant increase in the probability of occurrence or consequences of any accident previously evaluated.

The Braidwood Technical Specifications allow for one train of ECCS to be inoperable in Modes 1, 2, and 3 for seven days. The seven day Completion Time is based on a probabilistic risk assessment evaluation that concludes that the Completion Time does not significantly affect the overall probability of core damage. The impact on risk associated with the requested one-time extension of 20 hours is small and is not risk significant in comparison with the acceptance criteria stated in the Electric Power

Research Institute "PSA Applications Guide." Thus, risk continues to be maintained at an acceptable level. Also, a RHR pump failure is not considered as an initiator of any analyzed event. Therefore, this change will not significantly increase the probability of occurrence of any event previously analyzed in the current Braidwood Station Updated Final Safety Analysis Report.

The consequences of previously analyzed events are dependent on the initial conditions assumed in the analyses, the availability and successful functioning of equipment assumed to operate in response to the analyzed events, and the setpoints at which these actions are initiated. The requested extension of the Completion Time for restoring an ECCS train to operable status will not have any adverse impact on the 1A ECCS train. The remaining operable train will actuate on an ECCS signal and provide design flow to the core. Because of this redundancy, plant parameters will continue to be maintained consistent with the safety analyses assumptions. Accordingly, the requested enforcement discretion will not involve a significant increase in the consequences of any accident previously evaluated.

**B. The request for enforcement discretion does not create the possibility of a new or different kind of accident from any accident previously evaluated.**

The proposed action does not involve physical alteration of the unit. No new equipment is being introduced and installed equipment is not being operated in a new or different manner. There is no change being made to the parameters within which the unit is operated. There are no setpoints at which protective or mitigative actions are initiated that are affected by this proposed action. This proposed action will not alter the manner in which equipment operation is initiated nor will the function demands on credited equipment be changed. No alteration in the procedures, which ensure the unit remains within analyzed limits, is proposed, and no change is being made to procedures relied upon to respond to an off-normal event. As such, no new failure modes are being introduced. The proposed action does not alter assumptions made in the safety analysis. Therefore, the proposed action does not create the possibility of a new or different kind of accident from any accident previously evaluated.

**C. The proposed request for enforcement discretion does not involve a significant reduction in a margin of safety.**

Margins of safety are established in the design of components, the configuration of components to meet certain performance parameters, and in the establishment of setpoints to initiate alarms or actions. The ECCS provides core cooling and negative reactivity to the core following an accident.

The ECCS consists of two 100% redundant trains of equipment, including two RHR pumps. The accident analysis assumes a single failure of a component. Because of the redundancy, plant parameters will continue to be maintained consistent with the safety analyses assumptions. A risk evaluation indicates there is no net radiological risk increase associated with the requested one-time extension of the Completion Time for an inoperable ECCS train by 20 hours. Based on the above, the requested enforcement discretion will not involve a significant reduction in a margin of safety.

Therefore, based on the above evaluation, Braidwood Station has concluded that this request for enforcement discretion does not involve a significant hazards consideration.

**6.0 The basis for the licensee's conclusion that the noncompliance will not involve adverse consequences to the environment.**

Braidwood Station has evaluated the requested enforcement discretion against the criteria for identification of licensing and regulatory actions requiring environmental assessment in accordance with 10 CFR 51.21, "Criteria for and identification of and regulatory actions requiring environmental assessments." The proposed action involves noncompliance with the requirements of a TS Required Action. It has been determined that the requested action meets the criteria for categorical exclusion as provided in accordance with 10 CFR 51.22(c)(9), and as such it has been determined that no irreversible consequences exist in accordance with 10 CFR 50.92(b). This determination is based on the fact that the proposed action is being requested as enforcement discretion to a license issued pursuant to 10 CFR 50, "Domestic Licensing of Production and Utilization Facilities," that affects a requirement with respect to use of a facility component located in the restricted area, as defined in 10 CFR 20, "Standards for Protection Against Radiation," and that the action meets the following specific criteria.

- i The proposed action involves no significant hazards considerations. As demonstrated in Section 5.0 of this submittal, the proposed action does not involve any significant hazards consideration.
- ii There is no significant change in the types or significant increase in the amounts of any effluent that may be released offsite. The proposed action does not affect the generation of any radioactive effluent.
- iii There is no significant increase in individual or cumulative occupational radiation exposure. The action proposed in this request for enforcement discretion will not affect plant radiation levels; and therefore, does not affect dose rates and occupational exposure.

**7.0 Any proposed compensatory measure(s)**

1. The following key safety equipment is and will continue to be protected for the duration of the extension.

- Train A 4kV ESF Bus, Bus 141
- 4160V-480V Transformer 131X, ACB 1415X
- 480 V safety related Bus, Bus 131X
- 1A RHR pump
- 1A CV pump
- 1A SI pump
- 1SI8811A, 1A containment sump recirculation suction valve
- 1A ESF/RPS actuation train
- 480 V safety related motor control center (MCC) 131X1
- 480 V safety related MCC 131X5
- Instrument Bus Inverter 111
- 125 VDC ESF Battery 111
- Battery Charger 111

- 1A Auxiliary Feedwater Pump
- 1B Auxiliary Feedwater Pump
- 1A Emergency Diesel Generator
- Train B 4 kV ESF Bus, Bus 142
- 1CV8804A, CV pump suction crosstie from 1A RHR pump
- Unit 1 CC heat exchanger
- 1SI8812A, 1A RHR pump RWST suction valve

To ensure the status of the equipment was known by plant personnel, the equipment was marked as protected using signage. This signage was independently verified within the Operations department. The list of protected equipment will be placed in the Operation's logs and turned over to subsequent Operating crews. Additionally, Nuclear Oversight will confirm the proper installation of the protected equipment signage.

2. Specific Auxiliary Building Floodwatch Walkdowns will occur once per shift.
3. The current weather forecast for the area provided by the National Weather Service did not predict severe weather during the requested extension. The risk has been evaluated and will be re-evaluated if severe weather threatens offsite power lines.
4. No high production risk activities will be allowed on Unit 1.
5. 1B Auxiliary Feedwater pump diesel oil day tank level is being maintained greater than 80 %.
6. Operations Shift personnel will receive a Heightened Level of Awareness briefing at the beginning of each shift that the NOED is in effect.
7. Operating management has evaluated and will continue to evaluate surveillances and other work to be performed on the unit and will reschedule activities that have the potential to adversely affect unit status.
8. No work activities will be allowed in the switchyard.

If at any time it becomes apparent that completion of the work on the 1B RHR pump will be significantly delayed or if other significant problems are discovered with the pump, management will terminate the time extension and comply with the action requirements.

**8.0 A statement that the request has been approved by the facility organization that normally reviews safety issues (Plant Onsite Review Committee, or its equivalent).**

The request for enforcement discretion has been approved by the Braidwood Station Plant Operations Review Committee.

**9.0 The request must specifically address which of the NUREG-1600, "General Statement of Policy and Procedures for NRC Enforcement Action," criteria is satisfied and how.**

The requested enforcement discretion has been evaluated against the criteria specified in NUREG-1600. We have determined that the requested action meets the NOED criteria for an operating plant. This determination is based on the intent to avoid an undesirable transient caused by the shutdown of the reactor as a result of compliance with the TS, and thus, minimizing potential safety consequences and operational risks associated with a unit shutdown.

- 10.0 If a follow-up license amendment is required, the request must include marked-up TS pages showing the proposed TS changes, and a commitment to submit the actual license amendment request within 48 hours.**

Not applicable.

- 11.0 Specific NUREG-1600 criteria for NOEDs involving severe weather or other natural events.**

Not applicable.