Xcel Energy®

2807 West County Road 75
Monticello, MN 55089

December 13, 2021

L-MT-21-072
10 CFR 50.90

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

Monticello Nuclear Generating Plant
Docket No. 50-263
Renewed Facility Operating License
No. DPR-22

License Amendment Request: Revise MNGP Technical Specifications to Support a Ten-Year Inspection of the Diesel Generator Fuel Oil Storage Tank

In accordance with 10 CFR 50.90, "Application for amendment of license, construction permit, or early site permit," the Northern States Power Company, a Minnesota corporation, doing business as Xcel Energy (hereafter "NSPM"), requests an amendment to the Technical Specifications (TS) for Monticello Nuclear Generating Plant (MNGP) Specification 3.8.3, "Diesel Fuel Oil, Lube Oil, and Starting Air," and Specification 3.8.2, "AC Sources – Shutdown." One-time-only TS changes are proposed to allow the common Fuel Oil Storage Tank (FOST) to be out-of-service for up to 14 days for the purpose of performing a License Renewal required ten-year inspection of the tank. An alternate fuel oil storage system will be installed and utilized during the tank inspection evolution, as necessary, to supply the required Emergency Diesel Generator (EDG) day tank.

The enclosure provides a description and assessment of the proposed TS changes. Attachment 1 to the enclosure provides the TS compensatory measures to be applied in accordance with a note to the ACTIONS Table of Specification 3.8.3. Attachment 2 to the enclosure provides the existing TS pages marked-up to show the proposed changes. Providing only mark-ups of the proposed TS changes satisfies the requirements of 10 CFR 50.90 in that the TS mark-ups fully describe the changes desired. Attachment 3 to the enclosure provides the associated TS Bases mark-ups for information only.

In accordance with 10 CFR 50.91, "Notice for public comment; State consultation," paragraph (b), NSPM is notifying the State of Minnesota by providing a copy of this application, with this enclosure and attachments, to the State of Minnesota designated official.

NSPM requests issuance of this proposed license amendment within twelve months following completion of NRC acceptance review. Approval is necessary to perform the License Renewal required ten-year inspection of the FOST during the spring 2023 Refueling Outage (RFO) and the amendment will be implemented prior to beginning the inspection.

If there are any questions or if additional information is needed, please contact Mr. Richard Loeffler at (612) 342-8981 or Rick.A.Loeffler@xcelenergy.com.

Summary of Commitments

This letter makes no new commitments and no revisions to any existing commitments.

I declare, under penalty of perjury, that the foregoing is true and correct. Executed on December 13, 2021.

Thomas A. Conboy
Site Vice President, Monticello Nuclear Generating Plant
Northern States Power Company – Minnesota

Enclosure

cc: Administrator, Region III, US NRC
Project Manager, Monticello, US NRC
Resident Inspector, Monticello, US NRC
State of Minnesota

REVISE MNGP TECHNICAL SPECIFICATIONS TO SUPPORT A TEN-YEAR INSPECTION OF THE DIESEL GENERATOR FUEL OIL STORAGE TANK

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LICENSE AMENDMENT REQUEST

REVISE MNGP TECHNICAL SPECIFICATIONS TO SUPPORT A TEN-YEAR INSPECTION OF THE DIESEL GENERATOR FUEL OIL STORAGE TANK

1.0 SUMMARY DESCRIPTION

In accordance with 10 CFR 50.90, "Application for amendment of license, construction permit, or early site permit," the Northern States Power Company, a Minnesota corporation, doing business as Xcel Energy (hereafter "NSPM"), requests a one-time-only license amendment to the Technical Specifications (TS) for the Monticello Nuclear Generating Plant (MNGP). The proposed TS changes to Specification 3.8.3, "Diesel Fuel Oil, Lube Oil, and Starting Air," and Specification 3.8.2, "AC Sources – Shutdown," will allow the common diesel Fuel Oil Storage Tank (FOST) to be removed from service, during the 2023 Refueling Outage (RFO) for up to 14 days, for the performance of License Renewal committed inspection activities. This involves fully draining the FOST every ten years for the performance of these inspections and any necessary cleaning, repair, and testing activities required during the evolution (referred to hereafter as the "inspection evolution"). Performance of the FOST inspection will occur during the RFO when the reactor is shutdown and the reactor cavity is fully flooded up for refueling.

To support the removal of the FOST from service, a temporary, alternate fuel oil storage system (AFOSS) will be installed onsite to supply the requisite 7-day supply of fuel oil to the required emergency diesel generator (EDG) day tank during the FOST inspection evolution.

The proposed TS changes to Specification 3.8.3 maintain OPERABILITY of the required EDG through utilization of the AFOSS, implementation of initial conditions, and specification of TS requirements and compensatory measures in proposed Note 2 to the specification's ACTIONS Table, during the period the FOST is out-of-service (OOS).

The proposed TS change to Specification 3.8.2 clarifies that Surveillance Requirement (SR) 3.8.1.5 – which verifies fuel oil transfer from the FOST to the EDG day tanks and from the EDG day tanks to the associated diesel generator base tank, is not applicable during the FOST inspection evolution.

2.0 DETAILED DESCRIPTION

2.1 Electrical System Design and Operation

The plant electrical power system provides a diversity of dependable power sources which are physically isolated so that any one failure affecting one source of supply will not propagate to alternate sources. As described in the following section, three qualified offsite circuits can independently provide power for the plant's safety related loads. In Modes 4 or 5 (Cold Shutdown or Refueling, respectively), only a single offsite circuit is required by the TS. In the event of a loss or degradation of all off-site power sources, auxiliary power is supplied from diesel generators located on the site. Two independent redundant, EDGs provide sufficient

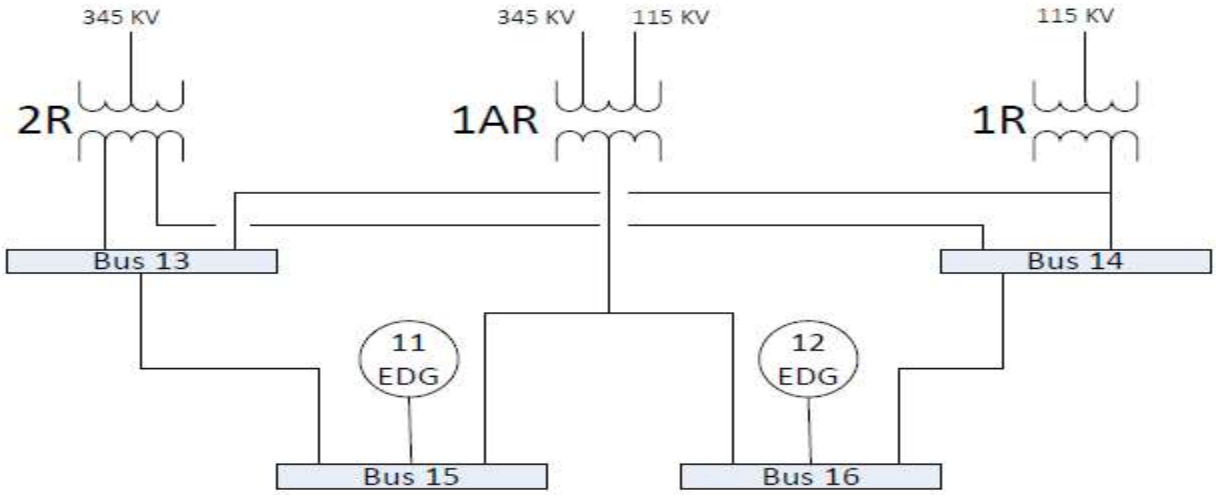
power to safely shut down the reactor upon the loss of all outside power simultaneous with the design basis accident. In Modes 4 or 5, only one EDG is required to be OPERABLE by the TS.

2.2 Transmission System Network Interconnections

The MNGP switchyard provides the transmission system power supplies for the plant power transformers. It consists of six primary transmission lines: three for the 345KV System and three for the 115KV System. The six (345 KV and 115 KV) transmission line connections to the switchyard are all connected into the Xcel Energy interconnected transmission grid leaving through four separate rights-of-way, that are considered independent as they are greater than a quarter mile apart at a distance of one mile from the plant. These lines and interconnections are designed and built to exceed the requirements of the National Electric Safety Code for heavy loading districts, Grade B construction.

Three transformers are provided to supply the plant with offsite power from the substation. All three sources can independently provide power for the plant's safety related loads. These transformers and their interconnections to the substation are as follows. The primary station auxiliary transformer, 2R, is fed from 345 KV Bus No. 1. The reserve transformer, 1R, is fed from the 115 KV substation, and will automatically assume plant loads if a loss of 2R occurs. Both of these transformers are of adequate size to provide the plant's full auxiliary load requirements. The final transformer is the 1AR reserve auxiliary transformer, which is sized and connected to only provide power to the plant's two essential 4160 VAC busses and connected loads. 1AR can be manually aligned to receive power from one of two separate supplies (the 345 KV or 115 KV Systems). 1AR will automatically power the essential busses upon a loss of power. In the event of a loss or degradation of all three off-site power sources to the essential busses, auxiliary power will be supplied from the two safety-related EDGs.

MNGP Electrical / EDG Systems



Specification 3.8.2, “AC Sources – Shutdown,” (Modes 4 and 5) states that one required EDG and one qualified offsite circuit capable of supplying the onsite Class 1E AC power distribution subsystems of Specification 3.8.8, “Distribution Systems – Shutdown,” are to be OPERABLE, ensuring that all required loads are powered from offsite power backed-up by a diesel generator in standby. As discussed in the TS Bases, the OPERABILITY of the required offsite circuit and the required EDG ensures the availability of sufficient AC sources to operate the plant in a safe manner and mitigate the consequences of postulated events during shutdown (e.g., fuel handling accidents involving handling irradiated fuel).

2.3 Diesel Generator System

As described in the MNGP Updated Safety Analysis Report (USAR), Section 8.4, “Plant Standby Diesel Generator Systems,” two independent EDGs provide redundant standby power sources. Each EDG is capable of providing sufficient power to safely shut down the reactor upon the loss of all outside power simultaneous with the design basis accident.

2.4 Diesel Oil Storage and Transfer System

The EDGs are provided with a common FOST having a fuel oil capacity sufficient to operate one EDG for 7 days while that EDG is supplying full load (2500 KW). This onsite fuel oil capacity is sufficient to operate the EDGs for longer than the time to replenish the onsite supply from outside sources.

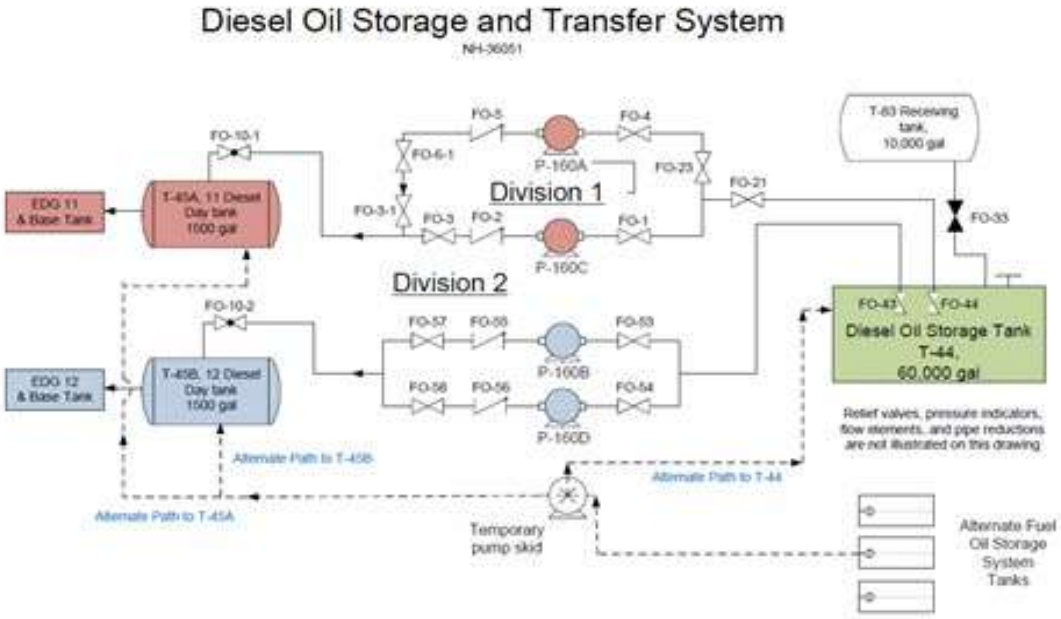
The EDG fuel oil transfer system includes a separate fuel oil transfer subsystem supplying each EDG. Fuel oil is transferred from the common underground 60,000 gallon FOST (T-44) to the respective EDG’s 1,500 gallon day tank (T-45A or B) by the subsystem associated with that EDG. [1] The EDG day tanks are installed in isolated, separate rooms within the Seismic Class 1 Diesel Generator Building. A 10,000 gallon Diesel Oil Receiving Tank (T-83) (located underground) is used to isolate replacement fuel oil until it can be sampled and verified to meet specifications prior to transfer to the FOST.

The 11 EDG transfer pumps (P-160A/C) are located in the Diesel Oil Pump House (below grade). The 12 EDG transfer pumps (P-160B/D) are located in the Diesel Generator Building T-45B Day Tank Room (above grade). [2] Each division has a dedicated suction connection to the FOST to provide an independent supply of fuel oil to each EDG day tank. Redundancy of the fuel oil transfer pumps and piping precludes a failure of one fuel oil transfer pump, or the rupture of any pipe or valve to result in the loss of more than one EDG. The EDG day tanks are kept continuously full by an operating transfer pump in each division, with the redundant pump available to place in service to support maintenance. Excess fuel oil recirculates back to

1. A “base” tank supplied by the EDG day tank is mounted on each diesel engine/generator base. The EDG day and base tanks, in combination, provide an 8 hour supply of fuel oil for the engine operating at full load.
2. The portion of the permanent Diesel Oil Storage and Transfer System associated with the 11 and 12 EDG transfer pumps cannot be used when the FOST is OOS and drained during the FOST inspection evolution.

the FOST by gravity flow from an overflow connection near the top of each day tank. Due to the differences in transfer pump elevation, to maintain adequate net positive suction head (NPSH), the FOST is maintained greater than 51,665 gallons (10'-7") when the 12 EDG is required OPERABLE, and 37,364 gallons (7'-10") when the 11 EDG is required OPERABLE. This provides sufficient capacity for seven days of operation of one EDG at rated load.

A hybrid diesel fuel oil supply system will be established prior to beginning the FOST drain down consisting of the existing required EDGs day and base tank located in the Diesel Generator Building, re-supplied as required, from the AFOSS as depicted below:



2.5 Current Technical Specification Requirements

This proposed TS change affects two specifications, Specification 3.8.2, "AC Sources – Shutdown," and Specification 3.8.3, "Diesel Fuel Oil, Lube Oil, and Starting Air." Specification 3.8.3 is the one primarily affected by the proposed temporary TS changes and will serve as the governing specification by imposing TS controls for the FOST inspection evolution.

Specification 3.8.3 supports Specification 3.8.2 by providing the applicable conditions and surveillance requirements for the diesel fuel oil, lube oil, and for the starting air subsystem. Specification 3.8.2 indicates that one EDG and one offsite circuit capable of supplying the onsite Class 1E power distribution subsystem are required to be OPERABLE in Modes 4 and 5.

Specification 3.8.3 – Required Actions and Associated Surveillance Requirement

Specification 3.8.3, Condition A, provides a 48-hour Completion Time to restore fuel oil level inside the FOST to within limits.

CONDITION		REQUIRED ACTION		COMPLETION TIME
A.	Fuel oil level < 7-day supply and > 6-day supply in storage tank.	A.1	Restore fuel oil level to within limits.	48 hours

If Condition A is not met, i.e., fuel oil level is below the 6-day supply level, Specification 3.8.3 Condition G is immediately entered which requires declaring the associated EDG inoperable.

The associated surveillance requirement is SR 3.8.3.1 which states:

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

Specification 3.8.2 – AC Sources – Shutdown

SR 3.8.2.1 under Specification 3.8.2 lists the applicable surveillances for AC sources required OPERABLE during shutdown and refueling conditions.

SURVEILLANCE		FREQUENCY
SR 3.8.2.1	----------NOTES---------- The following SRs are not required to be performed: SR 3.8.1.3, SR 3.8.1.7, SR 3.8.1.9, and SR 3.8.1.11. ---------- The following SRs are applicable for AC sources required to be OPERABLE: SR 3.8.1.1 SR 3.8.1.5 SR 3.8.1.2 SR 3.8.1.7 SR 3.8.1.3 SR 3.8.1.9 SR 3.8.1.4 SR 3.8.1.11	In accordance with applicable SRs

One of the listed surveillances is SR 3.8.1.5, which states:

SURVEILLANCE		FREQUENCY
SR 3.8.1.5	Verify the fuel oil transfer system operates to transfer fuel oil from the storage tank to the day tanks and from each day tank to the associated base tank.	In accordance with the Surveillance Frequency Control Program

See Section 3.3 of this enclosure for a discussion about the performance of these surveillances.

2.6 Reason for the Proposed Changes

The FOST is required to be inspected every ten years under the License Renewal Aging Management, Fuel Oil Chemistry, and Buried Piping and Tanks Inspection programs to manage aging effects regarding the potential for loss of material due to general corrosion, pitting corrosion, crevice corrosion, galvanic corrosion, and microbiological influenced corrosion.

This requires that the FOST be drained, inspected, cleaned, and repaired (as necessary) during each ten year inspection performed with the plant shutdown during a refueling outage. NSPM plans to perform the next FOST internal inspection during the 2023 RFO. It is estimated that the required draining, inspecting, and refilling of the FOST will take approximately ten days. The requested 14-day Completion Time (see proposed Specification 3.8.3 Actions Table Note 2.b in the following section) includes some margin should the evolution take longer than expected, providing time to complete any necessary repairs if required.

2.7 Proposed Technical Specification Changes

The proposed TS changes allow the common FOST to be OOS for the purpose of performing License Renewal required ten year inspections of the tank and for any necessary cleaning, testing, and repair activities. An AFOSS will be installed to supply the required EDG day tank – maintaining the OPERABILITY of the required EDG during the inspection evolution.

<u>Specification 3.8.3 – Diesel Fuel Oil, Lube Oil, and Starting Air</u>

Specification 3.8.3 is proposed to be revised to add a new Note 2 before the ACTIONS Table (the existing note will now be Note 1). The new note, indicated by the revision bar on the table below, specifies the appropriate TS requirements and compensatory measures that are applicable during the FOST inspection evolution. The proposed compensatory measures are discussed in Section 3.7 and are also provided in Attachment 1 to this enclosure.

The proposed TS changes to the ACTIONS Table of Specification 3.8.3 are provided in Attachment 2, and associated TS Bases changes are provided in Attachment 3 for information only.

ACTIONS

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

1. Separate Condition entry is allowed for each EDG.

2. a. During the 2023 Refueling Outage the fuel oil storage tank (FOST) may be made inoperable and drained, to support cleaning, inspection, testing, and associated repair activities without entering Conditions A or G, provided Notes 2.b through 2.d are satisfied.

   If the FOST is not restored within 14 days, or if Notes 2.b through 2.d are not satisfied, enter Condition G.

   b. Verify once per 24 hours that the Alternate Fuel Oil Supply System (AFOSS) contains at least a 7-day supply of fuel oil.

   c. While in standby, verify once per 24 hours that the required EDG day and base tanks, in combination, provide an 8-hour supply of fuel oil.

   d. The compensatory measures specified within Attachment 1 to letter L-MT-21-072 are applicable during performance of the FOST inspection evolution.

   e. SR 3.8.1.5 and SR 3.8.3.1 are not required to be met during the FOST inspection evolution.

   f. Note 2 expires upon completion of the FOST inspection evolution during the 2023 Refueling Outage.

Specification 3.8.2 – AC Sources – Shutdown

Specification 3.8.2 is proposed to be revised to add a new Note 2 under SR 3.8.2.1 (the existing note will now be Note 1) to specify that SR 3.8.1.5 is not applicable during the FOST inspection performed during the 2023 RFO. The proposed note is indicated by the revision bar on the table below.

SURVEILLANCE		FREQUENCY
SR 3.8.2.1	----------NOTES---------- 1. The following SRs are not required to be performed: SR 3.8.1.3, SR 3.8.1.7, SR 3.8.1.9, and SR 3.8.1.11. 2. SR 3.8.1.5 is not applicable during the fuel oil storage tank inspection during the 2023 Refueling Outage. This note expires upon completion of that inspection. ---------- The following SRs are applicable for AC sources required to be OPERABLE: SR 3.8.1.1 SR 3.8.1.5 SR 3.8.1.2 SR 3.8.1.7 SR 3.8.1.3 SR 3.8.1.9 SR 3.8.1.4 SR 3.8.1.11	In accordance with applicable SRs

The proposed TS change to SR 3.8.2.1 is provided in Attachment 2, and the associated TS Bases changes are provided in Attachment 3 for information only.

3.0 TECHNICAL EVALUATION

3.1 Summary of the Overall Fuel Oil Storage Tank Inspection Evolution Considerations

During the 2023 RFO, the common FOST will be taken OOS and completely drained, for up to 14 days, to perform License Renewal committed inspections, until restored and refilled to greater than a 6-day supply of fuel oil in accordance with Specification 3.8.3, “Diesel Fuel Oil, Lube Oil, and Starting Air,” Condition A. Specification 3.8.2, “AC Sources – Shutdown,” requires one qualified offsite circuit, and one EDG, to be OPERABLE and capable of supplying one division of the onsite Class 1E AC electrical power distribution subsystem in Modes 4 and 5. This refueling outage is scheduled to be a Division 2 outage and the 12 EDG may be removed from service and be inoperable during the 12 EDG maintenance window. No maintenance will be scheduled on the 11 EDG, which will remain OPERABLE as the required EDG in accordance with the TS during the FOST inspection evolution.

NSPM as an initial condition to the FOST inspection evolution will configure the switchyard to require two of the three offsite power sources to be available to be aligned to the essential busses – providing one more source than the single source currently required by the TS for offsite power.

Since the Diesel Oil Storage and Transfer System is a support system for the EDGs, removal of the FOST from service would normally render the system inoperable and result in the required EDG being declared inoperable. During the period the FOST is OOS for inspection, the hybrid fuel oil supply system can be considered as consisting of two separate parts: first, the existing safety-related fuel oil portion with the required EDG day and base tanks combination located within the Seismic Category 1, Diesel Generator Building; second, the commercial-grade AFOSS portion located outside substituting for the FOST – described in detail in the following section.

NSPM considers that by the establishment of the hybrid fuel oil supply system, implementation of initial conditions, and specification of TS requirements and compensatory measures in proposed Note 2 to the Specification 3.8.3 ACTIONS Table, as described herein, that the required EDG can be maintained OPERABLE and that shutdown risk can be maintained at an acceptable level during this temporary configuration for the FOST inspection evolution.

The key actions and compensatory measures are:

1. Establish an alternate fuel oil supply system [AFOSS] for the required EDG.

2. Establish the required initial conditions before the FOST drain down and inspection evolution begins.

3. Establish compensatory measures before the FOST drain down and inspection evolution begins to further minimize the potential for a Loss of Offsite Power (LOOP) and to address the effects if one were to occur.

With the establishment of the AFOSS, the governing TS controls will be specified through the addition of Note 2 added prior to the ACTIONS Table in Specification 3.8.3.

Once the FOST is returned to service and declared OPERABLE, the TS conditions specified in Note 2 to the ACTIONS table for Specification 3.8.3 and in Note 2 to SR 3.8.2.1 for Specification 3.8.2, are no longer applicable and the AFOSS demobilized.

3.2 Alternate Fuel Oil Supply System

The AFOSS will be a hybrid fuel oil system consisting of two parts: first, the existing safety-related required EDG day and base tanks combination located within the Diesel Generator Building; and second, the double-walled temporary fuel oil storage tanks installed onsite, colloquially referred to as “FRAC” tanks and associated fuel oil transfer equipment, that will substitute for the FOST as the EDG day tank supply source. The FRAC tanks will be located outside the Protected Area with the hoses and the fuel transfer system located inside the Protected Area. Hoses from the FRAC tanks to the pumping equipment penetrating the Protected Area fencing area will have security compensatory measures implemented as determined by the Security Plan.

The FRAC tanks are typically rated at 18,000 gallons each and are of double-walled construction. The FRAC tanks will provide sufficient capacity for the operation of one EDG for seven days of operation at rated load. The tanks meet the Environmental Protection Agency (EPA) and the MNGP Oil Spill Prevention Control and Countermeasure Plan requirements and hence do not require an additional or third containment. The contracted FRAC tanks will be inspected and accepted by the plant quality control staff to be clean and free of contaminants.

Vendor-supplied fuel transfer equipment will include a skid-mounted filter/pump system, hoses with cam-lock fittings and collection basins placed under each hose connection. Pressure-tested hoses are to be used for fuel transfers to minimize the possibility of a hose rupture. Filtering equipment will remove particulates to ensure the Specification 5.5.8, “Diesel Fuel Oil Testing Program,” fuel oil total particulate concentration requirement of less than or equal to 10 mg/l is met. The fuel oil will be filtered when the FOST is pumped-out and when it is refilled, and also when supplied to the required EDG day tank.

The fuel transfer pump will be diesel powered to eliminate the need for plant power. A second diesel-powered fuel transfer pump will be available should mechanical problems develop with the primary pump. Fuel oil transfer capability of the vendor-supplied equipment for the flowpaths from the temporary fuel oil storage tanks to the required EDG day tank, and also to and from the FOST will be tested prior to use.

Operating procedures for the AFOSS will be developed. Training will be provided to the operators as determined by the systematic approach to training (SAT) process for the fuel oil transfer activities occurring during the FOST inspection evolution.

The thermal heat flux from a fire postulated to occur at the FRAC tanks location has been evaluated with respect to the impact on the plant, in accordance with USAR Appendix J, “Fire Protection Program,” requirements, NEIL Insurance requirements, and the Independent Spent Fuel Storage Installation (ISFSI) fire hazards analysis and meets the standoff distance and thermal heat flux fire protection requirements.

The EDG day and base tanks in combination provide a safety-related, seismically-qualified 8-hour supply of fuel oil. The AFOSS provides the requisite 7-day supply of fuel oil to the required EDG day tank during the FOST inspection evolution. If a start occurs of the required EDG, the associated day tank can be refilled by simple proceduralized manual operator actions in a small fraction of the 8-hour day tank runtime. Based upon results from the last performed ten year FOST inspection evolution, and vendor information, fuel oil can be transferred from the FRAC tanks to the required EDG day tank at a rate of approximately 50 gpm. Complete refilling of the required EDG day tank (1,500 gallon tank) is estimated to take approximately 30 minutes.

When refilling the required EDG day tank, a hose from the fuel oil AFOSS transfer pump will be routed through a door of the Diesel Generator Building and into the required EDG day tank room. An elbow on the vent line from the day tank return to the FOST will be removed and used as the fill connection to the required EDG day tank. Appropriate fire protection and

security measures will be implemented during the time the hose is run through the door of the Diesel Generator Building.

AFOSS Weather Operational Considerations

If an EDG start has occurred, local weather conditions will be frequently monitored to identify appropriate timeframes within the weather forecast to refill the required EDG's day tank within the 8-hour EDG runtime. Actions will be taken to secure the fuel transfer equipment filter/pump systems, hoses, etc., in the event of severe weather. Duplicates of key pieces of equipment, e.g., fuel transfer pumps and hoses, will limit the impact of the effects of any potential severe weather on the pumping circuit between the FRAC tanks and the required EDG day tank within the Diesel Generator Building. If the FRAC tanks were themselves to be impacted, there are multiple sources of diesel fuel oil available onsite (see Section 3.6 of this enclosure) and within the Twin Cities metro area.

Given that the required EDG day and base tanks combined volume provides for 8-hours of continuous operation, and the time to completely refill the day tank is a small fraction of this time (approximately 30 minutes), even if the day tank has been substantially depleted, the tank can be quickly refilled the hoses removed and the Diesel Generator Building door closed.

Therefore, the AFOSS provides a viable method of storing the required 7-day supply of diesel fuel oil for the duration of the FOST inspection evolution and for the refilling of the required EDG day tank as required.

3.3 Technical Specification Surveillance Performance Considerations

The following are TS requirements referred to within proposed Note 2 to the Specification 3.8.3 ACTIONS Table. Note 2.e in the ACTIONS Table states that "SR 3.8.1.5 and SR 3.8.3.1 are not required to be met during the FOST inspection evolution." The basis for not requiring these surveillances to be met are the following.

SR 3.8.1.5 – This surveillance requires one to "Verify the fuel oil transfer system operates to transfer fuel oil from the storage tank to the day tanks and from each day tank to the associated base tank."

> The first portion of SR 3.8.1.5, to "verify the fuel oil transfer system operates to transfer fuel oil from the [fuel oil] storage tank to the day tanks," cannot be met during the FOST inspection evolution since the tank is empty or not filled sufficiently to provide adequate NPSH to the permanently installed fuel oil transfer pumps.
>
> The second portion of SR 3.8.1.5, to "verify the fuel oil transfer system operates to transfer fuel oil from each day tank to the associated base tank," will be met by the last performance of SR 3.8.1.5 prior to beginning the FOST drain down inspection evolution. This portion verifies proper operation of the diesel engine skid-mounted transfer pumps to transfer fuel oil from the EDG day tank to the base tank.

Performing this surveillance decreases the volume of fuel in the required EDG day tank. The portion of the diesel oil subsystem downstream from the day tank is unaffected by the conduct of the FOST inspection evolution and hence there is no reason to perform during the evolution.

SR 3.8.3.1 – This surveillance requires one to "Verify the fuel oil storage tank contains ≥ a 7-day supply of fuel."

SR 3.8.3.1 cannot be met while the FOST is drained or partially filled during the FOST inspection evolution. Therefore, Note 2.b requires to "Verify once per 24 hours that the AFOSS contains at least a 7-day supply of fuel oil." SR 3.8.3.1 is not required to be met and cannot be met during the FOST inspection evolution.

Therefore, SR 3.8.3.1 and SR 3.8.1.5 cannot be met given the hybrid fuel oil system configuration.

3.4 Initial Conditions

The necessary initial conditions prior to beginning the 10-year FOST inspection are:

1. Establish the alternate fuel oil supply system.

2. Meet TS requirements and compensatory measures in proposed Note 2 to the Specification 3.8.3 ACTIONS Table.

3. The reactor is in Mode 5 (Refueling) with the reactor cavity fully flooded up and the fuel pool gates out. (This provides the largest water volume to cool the fuel in the SFP and the reactor cavity, and typically takes approximately 60 hours to accomplish after the reactor is shutdown.)

4. Protect the required EDG and its division of Emergency Core Cooling Systems.

5. Protect two of three power sources (i.e., the 1R, 2R, or 1AR transformers).

6. Evaluate the weather forecast.

Establishment of these initial conditions put the plant in the best posture to cope with any unforeseen events, by maximizing the available sources of offsite power, maximizing decay heat removal, and providing a suitable source of fuel oil to the required EDG.

3.5 Shutdown Risk and Defense-in-Depth

NSPM has a Shutdown Safety Assessment Process to assess nuclear risk and ensure that systems and components that perform key safety functions [3] are available when needed. This involves providing administrative controls that support the protection and functionality of key equipment in order to mitigate risk and maintain defense-in-depth. Outages are planned and executed to maximize shutdown safety. Out of the shutdown safety assessment (SSA) process, a Shutdown Safety Plan is developed pre-outage that provides strategies developed pre-outage to ensure adequate defense in depth for the key safety functions (KSFs), including those addressing FLEX and Extended Loss of AC Power (ELAP), and is maintained throughout the execution of the RFO.

External events, i.e., an event that initiates outside of the plant systems that can affect the operability of plant systems, such as a seismic event, fire, high winds/tornadoes, or external flood are assessed as part of the SSA process. This includes the availability of equipment to respond to a Station Blackout (SBO) / ELAP and the available strategies are assessed along with KSFs.

As discussed in the TS Bases for Specification 3.8.2, “AC Sources – Shutdown,” assuming a single failure and concurrent LOOP or a loss of all onsite power is not required to be postulated based on the fact that many Design Basis Accidents (DBAs) analyzed in MODES 1, 2, and 3 have no specific analyses in MODES 4 and 5. In Modes 4 and 5, Specification 3.8.2 requires only one offsite circuit and one EDG to be capable of supplying the onsite Class 1E power distribution subsystems that are required to be OPERABLE. Given the hybrid nature of the fuel oil system to be utilized during the FOST draindown and inspection evolution, the ability of the AFOSS portion of the system to operate following an external event cannot be assumed. However, through establishment of appropriate initial conditions, e.g., flooding up the refueling cavity, protecting the EDG and its division of ECCS systems, protecting more than the single required offsite source, having alternate injection systems available, etc., the impact of a LOOP (while not required to be postulated) can be mitigated – even with a temporary loss of the AFOSS fuel oil supply to the required EDG.

During refueling operations, the Shutdown Cooling System and its supporting systems are the primary means of removing decay heat. The Spent Fuel Pool (SFP) Cooling System also provides a limited means of removing decay heat from the reactor and SFP.

A key consideration is to address the potential for a loss of electrical power availability (KSF) (including both onsite and offsite power) and avoid or mitigate an SBO /ELAP. One method to do this is to reduce the dependency on electrical power to supply sources to cool the fuel and to provide more coping time to restore power if a loss were to occur.

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3. The Key Safety Functions are: 1) Decay heat removal capability from the reactor and providing Spent Fuel Pool Cooling, 2) Electrical Power Availability (includes both on-site and off-site), 3) Inventory Control, 4) Reactivity Control, and 5) Containment Closure.

To mitigate both these potential areas of concern, the FOST inspection will be performed during Mode 5 (Refueling) with the reactor cavity fully flooded up and the fuel pool gates removed which provides the largest water volume to cool the fuel in the SFP [4] and within the reactor. This means that the FOST will not be drained earlier than approximately 60 hours after plant shutdown (i.e., all rods in). This maximizes the time to respond if a LOOP or ELAP occurs.

The second advantage of retaining the core within the reactor vessel with the SFP flooded up is that it allows for the use of in-vessel connected alternate injection systems as discussed within the next section.

3.6 Alternate Injection Systems

Upon a loss of shutdown cooling to the reactor vessel and SFP, alternate injection systems are available to remove decay heat. Operation of these alternate systems is proceduralized. The systems are supplied, or can be supplied, by electrical sources not powered from the 2R, 1R, or the 1AR transformers, i.e., those not part of the normal plant electrical system providing defense-in-depth. The following are potential pathways available to inject water into the reactor cavity if SFP or shutdown cooling was lost in a LOOP event:

1. Start the required EDG and re-power Division 1 of the Residual Heat Removal (RHR) system to provide Shutdown Cooling. Fuel oil could be supplied to the required EDG from various sources. [5]

2. Condensate Service Water Pump (CSW) injection through the RHR/Core Spray keep fill lines. The CSW pump can be powered by the 13 Diesel Generator – Non-1E (DG13) which provides an approximately 12 hour run time and which can be refilled from an external source in accordance with plant procedures.

3. Diesel Fire Pump injection through the Low Pressure Coolant Injection (LPCI) lines. The Diesel Fire Pump can operate for approximately 10 hours from its fuel oil tank. This tank can be refilled from an external source in accordance with plant procedures.

4. Fire Pumper Truck injection through the LPCI lines. Procedural guidance is established for this method of injection.

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4. Due to the number of additional available injection sources, there is less risk in keeping the irradiated fuel in the core, with a significantly greater volume of water above it than from transferring all of the fuel to the SFP (a Full Core Offload (FCOL), which under our TS/operating license is allowed and would allow the FOST to be OOS indefinitely.
5. For example, fuel oil could be supplied to the required EDG from: 1) the 264 gallon FLEX fuel transfer cubes, 2) the other EDG's 1,500 gallon day tank, 3) the 10,000 gallon Diesel Oil Receiving Tank (T-83) (located underground), or 4) the 20,000 gallon Heating Boiler Oil Storage Tank (T-84) (located underground).

5. Portable diesel powered FLEX Pump injection through the RHR Service Water (RHRSW) System Crosstie to LPCI. The FLEX Diesel tank can be refilled from an external source in accordance with plant procedures.

6. Portable diesel powered FLEX Pump injection through the Fire Crosstie to LPCI. The FLEX Diesel tank can be refilled from an external source in accordance with plant procedures.

7. Portable diesel powered FLEX Pump injection through the RHR-A Piping to LPCI. The FLEX Diesel tank can be refilled from an external source in accordance with plant procedures.

Therefore, there are a multitude of ways that decay heat removal can be accomplished, if required, not relying on offsite power or the EDGs, once again providing time to address the situation if a LOOP were to occur and the required EDG became inoperable.

3.7 Compensatory Measures

The following are the compensatory measures referred to within proposed Note 2 to the Specification 3.8.3 ACTIONS Table to maintain OPERABILITY of the required EDG during the FOST inspection evolution. Note 2.d states:

> The compensatory measures specified within Attachment 1 to letter L-MT-21-072 are applicable during performance of the FOST inspection evolution.

The following are the proposed compensatory measures. Where appropriate, additional discussion is provided for clarity.

1. Prior to removing the FOST from service verify the AFOSS is staged and can contain and provide at least a 7-day supply of fuel oil to the required EDG.
   Discussion: Prior to and during fuel transfer operations between the AFOSS and the FOST the 7 day supply of fuel oil to the required EDG is met by the overall fuel oil storage volume contained within the hybrid system.

2. Prior to removing the FOST from service verify the required EDG day and base tank, in combination, provide an 8-hour supply of fuel oil to the required EDG.

3. Procedures will be instituted to transfer fuel oil between the FOST and the AFOSS and from the AFOSS to the required EDG day tank.

4. Elective maintenance and testing that affects OPERABILITY of the required EDG will not be permitted.

5. Two of three power sources (i.e., the 1R, 2R, or 1AR transformers) are “protected” during the inspection evolution.

6. Evaluate weather forecast prior to beginning the FOST inspection evolution and periodically thereafter.

These compensatory measures together with the other controls put in place provide appropriate measures to preclude or mitigate potential adverse during the FOST inspection evolution.

3.8 Reliability and Risk Considerations

During the FOST inspection evolution, the required EDG will as at present, continue to rely on its safety-related 8-hour day tank located within the Seismic Category 1, Diesel Generator Building to provide fuel oil for operation, and the EDG will be periodically resupplied, as necessary, from the AFOSS during the time the FOST is OOS. Using a different standby fuel oil source (i.e., the AFOSS rather than the FOST), to maintain diesel OPERABILITY has a minimal effect on the reliability of the required EDG provided the TS requirements and compensatory measures are implemented for the limited duration (up to 14 days) for the FOST inspection evolution. As previously discussed, the AFOSS is a simple, straightforward-to-operate, self-contained system, comparable to other plant systems that the operators run day-in and day-out. Several other MNGP diesel systems, such as the 13 Diesel Generator – Non-1E (DG13), the Diesel Fire Pump, and the FLEX diesels all rely on manual refilling of their fuel oil supply tanks. Resupplying operations of these diesels are accomplished in accordance with approved plant procedures. Manual operation of these systems has indicated a negligible impact on reliability, and as demonstrated in the case of FLEX equipment has been determined to be acceptable on an industrywide basis by the NRC, provided appropriate procedures and training are in place to minimize the potential for operator errors. The periodic resupply of the required EDG day tank from the AFOSS is similar to refill operations conducted for DG13, the Diesel Fire Pump, and the FLEX diesels – and hence, well within the established skillset and training currently provided to operators.

Procedures will be in place and training will be provided to the operators as determined by the systematic approach to training (SAT) process for the fuel oil resupply activities to the required EDG's day tank during the FOST inspection evolution.

The periodic resupply of the required EDG from the AFOSS is only necessary if there is a diesel start involving significant runtime of the required EDG. If there is a diesel start, after determination that the diesel is not required to be operating to power to the 4160 Vac essential busses (i.e., power is being supplied from the primary station auxiliary transformer (2R) or the reserve transformer (1R), or a subsequent transfer to the 1AR reserve auxiliary transformer has occurred), the required EDG may be shutdown – terminating fuel oil usage from the required EDG combined day and base tanks (8-hour capacity). Therefore, there is adequate time for the operators to fill the required EDG day tank as necessary. Limiting Condition for Operation (LCO) 3.8.3 will be evaluated and Condition G will be entered as appropriate under these conditions. Refill of the required EDG day tank can be performed in a manner and at a time that best supports plant operations.

Other than the utilization of the AFOSS and the implementation of the additional compensatory measures reflecting this temporary configuration of the Diesel Fuel Oil Storage and Transfer System, there are no changes to how the operators conduct this refueling outage from a typical outage.

4.0 REGULATORY EVALUATION

4.1 Applicable Regulatory Requirements/Criteria

10 CFR 50.36(c)(2) stipulates that a TS Limiting Condition for Operation (LCO) must be established for each item meeting the following criteria:

> A structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a design basis accident or transient that either assumes the failure of, or presents a challenge to, the integrity of a fission product barrier.

LCOs have been established for the EDGs and for their diesel fuel oil supply. The proposed amendment does not make any permanent changes to plant equipment that provides emergency power to the safety-related emergency buses. Evaluation of the amendment has determined that the reliability of AC electrical sources is not significantly affected by the proposed changes and that applicable regulations and requirements continue to be met.

The MNGP design was reviewed for construction under the *General Design Criteria for Nuclear Power Plant Construction*, issued for comment by the AEC in July 1967 and is committed to meet the intent of the General Design Criteria (GDC), published in the Federal Register on May 21, 1971, as Appendix A to 10 CFR Part 50.

10 CFR 50, Appendix A, GDC Criterion 17, *Electric power systems*, requires that nuclear power plants have onsite and offsite electric power systems to permit the functioning of structures, systems, and components (SSCs) that are important to safety. The safety function for each system (assuming the other system is not functioning) shall be to provide sufficient capacity and capability to assure that (1) specified acceptable fuel design limits and design conditions of the reactor coolant pressure boundary are not exceeded as a result of anticipated operational occurrences and (2) the core is cooled and containment integrity and other vital functions are maintained in the event of postulated accidents.

The onsite system is required to have sufficient independence, redundancy, and testability to perform its safety function, assuming a single failure. The offsite power system is required to be supplied by two physically independent circuits that are designed and located so as to minimize, to the extent practical, the likelihood of their simultaneous failure under operating and postulated accident and environmental conditions. A switchyard common to both circuits is acceptable.

The proposed change does not affect NSPMs compliance with the intent of GDC 17.

10 CFR 50, Appendix A, GDC Criterion 18, *Inspection and testing of electric power systems*, states that electric power systems that are important to safety must be designed to permit appropriate periodic inspection and testing of important areas and features, such as wiring, insulation, connections, and switchboards, to assess the continuity of the systems and the condition of their components. The systems shall be designed with a capability to test periodically (1) the operability and functional performance of the components of the systems, such as onsite power sources, relays, switches, and buses, and (2) the operability of the systems as a whole and, under conditions as close to design as practical, the full operation sequence that brings the systems into operation, including operation of applicable portions of the protection system, and the transfer of power among the nuclear power unit, the offsite power system, and the onsite power system.

The proposed change does not affect MNGPs compliance with the intent of GDC 18.

10 CFR 50.63(a) of 10 CFR, *Loss of all alternating current power*, requires that each light water cooled nuclear power plant licensed to operate be able to withstand for a specified duration and recover from a station blackout. The proposed change does not affect MNGPs compliance with 10 CFR 50.63(a).

Therefore, based on the considerations discussed above, NSPM has determined that the proposed change does not require any exemptions or relief from regulatory requirements other than the TS, and does not affect conformance with the intent of any GDC differently than described in the USAR.

4.2 Precedent

The proposed LAR is similar to the following NRC approved license amendments:

1. The Brunswick Steam Electric Plant, Units 1 and 2, received amendments revising Specification 3.8.3, "Diesel Fuel Oil," to allow, on a one-time basis, the main fuel oil storage tank to be inoperable for up to 14 days for the purpose of performing required inspection, cleaning, and any necessary repair activities, contingent upon meeting certain imposed compensatory measures (Reference 1).

2. The Turkey Point Plant, Units 3 and 4, received amendments revising the TS to allow for the installation of a temporary fuel oil storage and transfer system in order to maintain the operability of the Unit 3 emergency diesel generators during the performance of a required surveillance to clean the permanent fuel oil storage tank. (Reference 2).

4.3 No Significant Hazards Consideration Analysis

In accordance with 10 CFR 50.90, “Application for amendment of license, construction permit, or early site permit,” the Northern States Power Company, a Minnesota corporation, doing business as Xcel Energy (hereafter “NSPM”), requests an amendment to the Technical Specifications (TS) for Monticello Nuclear Generating Plant (MNGP) Specification 3.8.3, “Diesel Fuel Oil, Lube Oil, and Starting Air,” and Specification 3.8.2, “AC Sources – Shutdown.” One-time-only TS changes are proposed to allow the common Fuel Oil Storage Tank (FOST) to be out-of-service for up to 14 days for the purpose of performing a License Renewal required ten-year inspection of the tank. An alternate fuel oil storage system will be installed during the tank inspection evolution to supply the required Emergency Diesel Generator (EDG) day tank.

NSPM has evaluated whether a significant hazards consideration is involved with the proposed amendment by focusing on the three standards set forth in 10 CFR 50.92, “Issuance of amendment,” as discussed below:

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

   Response: No

   The proposed amendment will allow the installation of a temporary Alternate Fuel Oil Storage System (AFOSS) to provide fuel oil to the required Emergency Diesel Generator (EDG) during the Fuel Oil Storage Tank (FOST) inspection evolution. The EDGs are designed as backup A/C power sources for essential safety systems in the event of a loss of offsite power (LOOP). Since the EDGs are not accident initiators, the probability of occurrence of accidents previously analyzed has not been increased.

   The proposed amendment will not change the function of the equipment assumed in the plant safety analyses for accident mitigation. Initial conditions will be met and compensatory measures taken prior to removing the FOST from service. The temporary AFOSS does not meet the requirements for Seismic Category I nor is it safety related, but it is a simple commercial-grade system, similar to other diesel fuel oil systems, such as the FLEX diesel. The AFOSS provides a reliable means of performing the required fuel oil delivery to support 7-days of operation for the required EDG.

   A slight but insignificant increase in the consequences of an accident previously evaluated is possible since the AFOSS is not Seismic Category I or safety-related but the combined volume of the safety related EDG day and base tanks provide for 8-hours of EDG operation, providing adequate time to refill the required EDG day tank or to restore the AFOSS, if required.

Therefore, operation of the plant in accordance with the proposed amendment would not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Do the proposed changes create the possibility of a new or different kind of accident from any accident previously evaluated?

   Response: No

   The AFOSS storage tanks will not meet the requirements for Seismic Category I. However, as discussed above, the permanent EDG day and base tanks supplies sufficient fuel oil capacity to provide, in the unlikely event of a seismic event or other design basis events, adequate time to operate the temporary system. The required EDG day and base tanks capacity provides adequate time for the operators to mitigate the effects of postulated design basis events. The AFOSS is designed to allow the required EDG day tank to be manually refilled periodically in the event EDG operation is required.

   Therefore, the proposed changes do not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Do the proposed changes involve a significant reduction in a margin of safety?

   Response: No

   The proposed amendment is designed to allow performance of a License Renewal required 10-year FOST inspection. The EDG operating requirements are not changed, only the method for diesel fuel oil storage and transfer to the required EDG during a refueling condition is addressed.

   The proposed change will not alter the basis for any Technical Specification that is related to the establishment of, or maintenance of, a nuclear safety margin. Therefore, the proposed changes do not involve a significant reduction in a margin of safety.

Based on the above, NSPM concludes that the proposed changes present no significant hazards consideration under the standards set forth in 10 CFR 50.92(c); accordingly, a finding of “no significant hazards consideration” is justified.

4.4 Conclusions

In conclusion, based on the considerations discussed above, (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

The proposed change would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, “Standards for Protection Against Radiation,” or would change an inspection or surveillance requirement. However, the proposed change does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluents that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed change meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22, “Criteria for categorical exclusion; identification of licensing and regulatory actions eligible for categorical exclusion or otherwise not requiring environmental review,” specifically paragraph (c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment needs to be prepared in connection with the proposed change.

6.0 REFERENCES

1. Letter from the U.S. NRC to Duke Energy Progress, LLC, “Brunswick Steam Electric Plant, Units 1 and 2 – Issuance of Amendments Nos. 290 and 318 to Revise Note on Brunswick TS 3.8.3 For One-Time Extension of Main Fuel Oil Storage Tank Completion Time (EPID L-2018-LLA-0110),” dated May 6, 2019 (ADAMS Accession Number ML19018A206)

2. Letter from the U.S. NRC to Florida Power and Light Company, “Turkey Point Units 3 and 4 – Issuance of Amendments Regarding Diesel Fuel Oil Storage and Transfer System (TAC Nos. M97376 and M97377),” dated June 9, 1998 (ADAMS Accession No. ML013390410)

ENCLOSURE

ATTACHMENT 1

MONTICELLO NUCLEAR GENERATING PLANT

LICENSE AMENDMENT REQUEST

REVISE MNGP TECHNICAL SPECIFICATIONS TO SUPPORT A TEN-YEAR INSPECTION OF THE DIESEL FUEL OIL STORAGE TANK

TECHNICAL SPECIFICATION COMPENSATORY MEASURES

(1 page follows)

TECHNICAL SPECIFICATION COMPENSATORY MEASURES

Compensatory Measures		
Description		**Due Date / Event**
1.	Prior to removing the Fuel Oil Storage Tank (FOST) from service verify the Alternate Fuel Oil Storage System (AFOSS) is staged and can contain and provide at least a 7-day supply of fuel oil to the required Emergency Diesel Generator (EDG).	During the FOST inspection preparation, inspection, cleaning, testing, and repair activities (hereafter the inspection evolution) during the 2023 Refueling Outage (RFO).
2.	Prior to removing the FOST from service verify the required EDG day and base tank, in combination, provide an 8-hour supply of fuel oil to the required EDG.	FOST inspection evolution during the 2023 RFO.
3.	Procedures will be instituted to transfer fuel oil between the FOST and the AFOSS and from the AFOSS to the required EDG day tank.	FOST inspection evolution during the 2023 RFO.
4.	Elective maintenance and testing, that affects OPERABILITY of the required EDG will not be permitted.	FOST inspection evolution during the 2023 RFO.
5.	Two of three power sources (i.e., the 1R, 2R, or 1AR transformers) are “protected” during the inspection evolution.	FOST inspection evolution during the 2023 RFO.
6.	Evaluate weather forecast prior to beginning the FOST inspection evolution and periodically thereafter.	FOST inspection evolution during the 2023 RFO.

ENCLOSURE

ATTACHMENT 2

MONTICELLO NUCLEAR GENERATING PLANT

LICENSE AMENDMENT REQUEST

REVISE MNGP TECHNICAL SPECIFICATIONS TO SUPPORT A TEN-YEAR INSPECTION OF THE DIESEL FUEL OIL STORAGE TANK

TECHNICAL SPECIFICATION PAGES (MARKED-UP)

(3 pages follow)

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.8.2.1 1. ----------NOTE---------- The following SRs are not required to be performed: SR 3.8.1.3, SR 3.8.1.7, SR 3.8.1.9, and SR 3.8.1.11. 2. ---------- The following SRs are applicable for AC sources required to be OPERABLE: SR 3.8.1.1, SR 3.8.1.2, SR 3.8.1.3, SR 3.8.1.4, SR 3.8.1.5, SR 3.8.1.7, SR 3.8.1.9, SR 3.8.1.11	In accordance with applicable SRs

SR 3.8.1.5 is not applicable during the fuel oil storage tank inspection during the 2023 Refueling Outage. This note expires upon completion of that inspection.

3.8 ELECTRICAL POWER SYSTEMS

3.8.3 Diesel Fuel Oil, Lube Oil, and Starting Air

LCO 3.8.3 The stored diesel fuel oil, lube oil, and starting air subsystems shall be within limits for each required emergency diesel generator (EDG).

APPLICABILITY: When associated EDG is required to be OPERABLE.

ACTIONS

----------NOTE----------
1. Separate Condition entry is allowed for each EDG.

INSERT A

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Fuel oil level < 7-day supply and > 6-day supply in storage tank.	A.1 Restore fuel oil level to within limits.	48 hours
B. One or more EDGs with lube oil inventory < 7-day supply and > 6-day supply.	B.1 Restore lube oil inventory to within limits.	48 hours
C. Stored fuel oil total particulates not within limit.	C.1 Restore fuel oil total particulates to within limit.	7 days
D. New fuel oil properties not within limits.	D.1 Restore stored fuel oil properties to within limits.	30 days

TS Specification 3.8.3 Required Actions – INSERT A

2. a. During the 2023 Refueling Outage the fuel oil storage tank (FOST) may be made inoperable and drained, to support cleaning, inspection, testing, and associated repair activities without entering Conditions A or G, provided Notes 2.b through 2.d are satisfied.

   If the FOST is not restored within 14 days, or if Notes 2.b through 2.d are not satisfied, enter Condition G.

   b. Verify once per 24 hours that the Alternate Fuel Oil Supply System (AFOSS) contains at least a 7-day supply of fuel oil.

   c. While in standby, verify once per 24 hours that the required EDG day/ base tanks, in combination, provides an 8-hour supply of fuel oil.

   d. The compensatory measures specified within Attachment 1 to letter L-MT-21-072 are applicable to performance of the FOST inspection evolution.

   e. SR 3.8.1.5 and SR 3.8.3.1 are not required to be met during the FOST inspection evolution.

   f. Note 2 expires upon completion of the FOST inspection evolution during the 2023 Refueling Outage.

ENCLOSURE

ATTACHMENT 3

MONTICELLO NUCLEAR GENERATING PLANT

LICENSE AMENDMENT REQUEST

REVISE MNGP TECHNICAL SPECIFICATIONS TO SUPPORT A TEN-YEAR INSPECTION OF THE DIESEL FUEL OIL STORAGE TANK

TECHNICAL SPECIFICATION BASES PAGES (MARKED-UP)

(FOR INFORMATION ONLY)

(4 pages follow)

BASES

ACTIONS (continued)

Pursuant to LCO 3.0.6, the Distribution System ACTIONS would not be entered even if all AC sources to it are inoperable, resulting in de-energization. Therefore, the Required Actions of Condition A have been modified by a Note to indicate that when Condition A is entered with no AC power to any required 4.16 kV essential bus, ACTIONS for LCO 3.8.8 must be immediately entered. This Note allows Condition A to provide requirements for the loss of the offsite circuit whether or not a division is de-energized. LCO 3.8.8 provides the appropriate restrictions for the situation involving a de-energized division.

SURVEILLANCE REQUIREMENTS

SR 3.8.2.1

SR 3.8.2.1 requires the SRs from LCO 3.8.1 that are necessary for ensuring the OPERABILITY of the AC sources in other than MODES 1, 2, and 3. Refer to the corresponding Bases for LCO 3.8.1 for a discussion of each SR.

Note 1

This SR is modified by ~~a Note~~ indicating that SR 3.8.1.3, SR 3.8.1.7, SR 3.8.1.9, and SR 3.8.1.11 are not required to be performed. The reason for the Note is to preclude requiring the OPERABLE required EDG from being paralleled with the offsite power network or otherwise rendered inoperable during the performance of SRs, and to preclude deenergizing a required 4.16 kV essential bus or disconnecting a required offsite circuit during performance of SRs. With limited AC sources available, a single event could compromise both the required circuit and the EDG. It is the intent that these SRs must still be capable of being met, but actual performance is not required during periods when the EDG and offsite circuit is required to be OPERABLE. In Modes 4 and 5 one ECCS subsystem is required to be capable of manual initiation but is not required to be OPERABLE; therefore SRs that demonstrate the EDG response to an ECCS signal are not required to be met in these Modes.

(New para.)

This SR is modified by temporary Note 2 which clarifies that SR 3.8.1.5 is not applicable during the common fuel oil storage tank inspection occurring during the 2023 Refueling Outage.

REFERENCES

1. USAR, Section 8.2

BASES

Note 1

ACTIONS

The ACTIONS Table is modified by a ~~Note~~ indicating that separate Condition entry is allowed for each EDG. This is acceptable, since the Required Actions for each Condition provide appropriate compensatory actions for each inoperable EDG subsystem. Complying with the Required Actions for one inoperable EDG subsystem may allow for continued operation, and subsequent inoperable EDG subsystem(s) governed by separate Condition entry and application of associated Required Actions.

INSERT A - (start new para.)

A.1

In this Condition, the 7 day fuel oil supply for an EDG is not available. The fuel oil equivalent to a 7-day supply is specified in SR 3.8.3.1. However, the Condition is restricted to fuel oil level reductions that maintain at least a 6 day supply. The fuel oil equivalent to a 6-day supply is 32,581 gallons for the 11 EDG and 46,859 gallons for the 12 EDG (Ref. 6). These circumstances may be caused by events such as either:

a. Full load operation required for an inadvertent start while at minimum required level; or

b. Feed and bleed operations that may be necessitated by increasing particulate levels or any number of other oil quality degradations.

This restriction allows sufficient time for obtaining the requisite replacement volume and performing the analyses required prior to addition of the fuel oil to the tank. A period of 48 hours is considered sufficient to complete restoration of the required level prior to declaring both EDGs inoperable. This period is acceptable based on the remaining capacity (> 6 days), the fact that procedures will be initiated to obtain replenishment, and the low probability of an event during this brief period.

B.1

In this condition the 7-day lube oil inventory i.e., sufficient lube oil to support 7 days of continuous EDG operation at full load conditions is not available. However, the Condition is restricted to lube oil volume reductions that maintain at least a 6 day supply. The lube oil equivalent volume to a 6-day supply is 142 gallons for each EDG. This restriction allows sufficient time for obtaining the requisite replacement volume. A period of 48 hours is considered sufficient to complete restoration of the required volume prior to declaring the EDG inoperable. This period is acceptable based on the remaining capacity (> 6 days), the low rate of usage, the fact that procedures will be initiated to obtain replenishment, and the low probability of an event during this brief period.

TS Bases Specification 3.8.3 ACTIONS Table – INSERT A

Note 2 modifies the ACTIONS Table by providing specific TS requirements and compensatory measures to apply during the common fuel oil storage tank inspection evolution to satisfy License Renewal commitments during the 2023 Refueling Outage.

2. a. During the 2023 Refueling Outage the fuel oil storage tank (FOST) may be made inoperable and drained, to support cleaning, inspection, testing, and associated repair activities without entering Conditions A or G, provided Notes 2.b through 2.d are satisfied.

   Note 2.a provides an allowance not to enter Condition A or G for up to 14 days due to the installation of an Alternate Fuel Oil Supply System (AFOSS), and the implementation of TS requirements, including compensatory measures in accordance with Attachment 1 to letter L-MT-21-072.

   If the FOST is not restored within 14 days, or if Notes 2.b through 2.d are not satisfied, enter Condition G.

   b. Verify once per 24 hours that the AFOSS contains at least a 7-day supply of fuel oil.

   Periodic verification of the required volume to allow for a 7-day supply of fuel oil to the required EDG is essential to meet the licensing basis for EDG operation. During fuel movement between tanks (e.g., between the AFOSS and the required EDG day tank or between the AFOSS and the FOST) the overall fuel oil storage volume contained within the hybrid system may be used to meet the 7-day requirement.

   c. While in standby, verify once per 24 hours that the required EDG day/base tanks, in combination, provides an 8-hour supply of fuel oil.

   Periodic verification of the required volume to allow for an 8-hour runtime of the required EDG is essential to allow the EDG day tank to be filled, as required, and to respond to any conditions with the non-safety related, non-seismic AFOSS portion of the hybrid fuel oil system.

   d. The compensatory measures specified within Attachment 1 to letter L-MT-21-072 are applicable to performance of the FOST inspection evolution.

   These compensatory measures together with the establishment of the initial conditions and the AFOSS allow the hybrid diesel fuel oil system to be considered OPERABLE during the up to 14-day period that the

FOST inspection evolution is occurring and the required EDG to be OPERABLE.

e. SR 3.8.1.5 and SR 3.8.3.1 are not required to be met during the FOST inspection evolution.

SR 3.8.1.5 The first portion of SR 3.8.1.5, to "verify the fuel oil transfer system operates to transfer fuel oil from the storage tank to the day tanks," cannot be met during the FOST inspection evolution. The second portion of SR 3.8.1.5, to "verify the fuel oil transfer system operates to transfer fuel oil from each day tank to the associated base tank," will be met by the last performance of SR 3.8.1.5 prior to beginning the FOST draindown and the inspection evolution. The portion of the diesel oil subsystem downstream from the day tank is unaffected by the inspection evolution and remains in service.

SR 3.8.3.1 This surveillance requires to "Verify the fuel oil storage tank contains ≥ a 7-day supply of fuel." SR 3.8.3.1 cannot be met while the FOST is drained or partially filled during the FOST inspection evolution. Note 2.b requires to "Verify once per 24 hours that the Alternate Fuel Oil Supply System (AFOSS) contains at least a 7-day supply of fuel oil." SR 3.8.3.1 is not required to be met during the FOST inspection evolution.

f. Note 2 expires upon completion of the FOST inspection evolution during the 2023 Refueling Outage.