

## PROPOSED CHANGE

### 2.0 LIMITING CONDITIONS FOR OPERATION 2.7 Electrical Systems (Continued)

- g. One of the four a-c instrument buses may be inoperable for 8 hours provided the reactor protective and engineered safeguards systems instrument channels supplied by the remaining three buses are all operable.
- h. Two battery chargers may be inoperable for up to 8 hours provided battery charger No. 1 or No. 2 is operable.
- i. Either one of the diesel generators may be inoperable for up to seven days (total for both) during any month, provided the other diesel is started to verify operability, shutdown and controls are left in the automatic mode and there are no inoperable engineered safeguards components associated with the operable diesel generator.
- j. Island buses 1B3A-4A, 1B3B-4B, and 1B3C-4C may be inoperable for up to 8 hours provided there are no inoperable safeguards components associated with the operable bus which are redundant to the inoperable bus.
- k. Either one of the DC buses (Panels EE-8F and EE-8G) may be inoperable for up to 8 hours.
- l. Either one of the DC Distribution Panels AI-41A and AI-41B may be inoperable for up to 8 hours.
- m. AC Instrument Panel AI-42A or AI-42B may be inoperable for up to 8 hours.
- n. The 161KV transmission line may be out of service and unit operation may continue in the Power Operation Condition (Mode 1) if the 345KV system and both diesel generators are operable. During the time the 161KV power source is unavailable, the requirement for the performance of the monthly surveillance tests on the diesel generators or any other test that could challenge the emergency actuation of the diesel generators is deferred until seven (7) days after restoring the 161KV power source.

#### Basic

The electrical system equipment is arranged so that no single failure can inactivate enough engineered safeguards to jeopardize the plant safety. The 480 V safeguards are arranged on nine bus sections. The 4.16kV safeguards are supplied from two buses.

The normal source of auxiliary power with the plant at power for the safeguards buses is from the house service power transformers being fed from the 161 kV incoming line with on-site emergency power

**ATTACHMENT B**

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Discussion,  
Justification and No Significant  
Hazards Consideration

Discussion:

Description of Amendment Request to change the Technical Specification 2.7(2)n, Limiting Condition for Operation for the 161 KV transmission line. To clarify operator actions in determining the remaining sources operability, eliminate the permissive to restart, and delete the notification requirements.

Justification:

The Omaha Public Power District (OPPD) has reviewed the adequacy of Technical Specification 2.7(2)n, Limiting Condition for Operation for plant operation with the 161 KV offsite power out of service. This review was made as committed to in Reference 2, to ensure the adequacy of this Technical Specification to direct OPPD action to insure reactor safety should the 161 KV line be removed from service (either by failure, maintenance, or grid conditions). The reliability of the 161KV transmission line is considered to be very good, demonstrating a 99.8% availability between 1973 and March 1989. The longest outage was one of seven days duration.

Based on the review, OPPD feels the following key points should constitute the specification, and define Fort Calhoun Operations:

- a. The existing specification permits continued operation and should not be changed to add a time limit. This is a safer course of action than a required shutdown because a turbine generator trip would cause a loss of offsite power. This loss of offsite power would cause the following:
  1. Diesel generators start and energization of the safety busses.
  2. Natural circulation cooling for core decay heat removal.
  3. Decay heat removal from the steam generators via the main steam safety valves due to the loss of the condenser.
  4. A challenge to the automatic auxiliary feedwater system.

The plant cannot establish the normal hot shutdown configuration until 345 KV backfeed has been established, condenser operations re-established, and reactor coolant pumps restarted.

This change reduces the possibility of complex transients and safety system challenges. The requirements of 2.7(2) to place the plant in hot shutdown within 12 hours and cold shutdown within 24 hours apply, should the provisions of this exception be violated.

- b. Generator synchronization with the 161 KV system out of service is not possible.

OPPD believes that the permissive to go to Mode 1 with the 161 KV transmission line out of service should be removed from the Technical Specification 2.7(2)n.

It should be understood that the present Technical Specification is incorrect in that although the reactor could be taken to (hot standby (critical)), the generator could not be synchronized to the power grid to supply house loads. This is because DS-T1 is a manual/motor disconnect switch with no synchronization capability. The 345KV bus must be deenergized before closing DS-T1. Removal of the 345KV bus would deenergize all four RCPs and this would scram the plant. In other words, the exercise of starting up the plant without the 161KV power available is meaningless.

Note, however, that the plant may change modes and approach 300° F without the diesel generators being operable under the current Technical Specification 2.7(1). This permissive is not affected by this license amendment. This is consistent with the safety analysis and allows operational flexibility.

- c. To clarify operator actions in determining the remaining power sources' operability, Technical Specification 2.7(2)n, was changed to specify that the 345KV system and both diesel generators must be operable.

However, during the time that the 161KV power supply is unavailable it is prudent not to perform surveillances on the two diesel generators. The surveillance requires that all protective devices including those bypassed on the emergency start to be operable. The diesel generator is inoperable during the time a surveillance is being performed and the surveillance therefore removes one of the two remaining emergency power supplies. This is considered less safe than reliance on the most recent surveillance when 161KV was available. Additionally, surveillance and tests that will challenge the emergency actuation of the diesel generators should not be performed. If in the performance of a surveillance the diesel is started, it would be necessary to run the diesel until normal operating pressures and temperatures were achieved. As the diesel will no longer be in a standby mode, operator action would be required to recover from those conditions which restrict automatic performance in a manner comparable to the normal standby mode. Performance of these surveillance procedures could render the diesels unavailable as a source of emergency power should they be called upon to perform their emergency function.

- d. The notification requirements in Technical Specification 2.7(2)n. were deleted. The reporting requirements of this outage are the same as and will be made as other items now reported under 10 CFR 50.72 and 10 CFR 50.73. Follow-up information will provide further information on the extent of the loss, present status, and plans to restore the electric power system to its full capability as soon as practicable.

Basis for No Significant Hazards Consideration:

This proposed change does not involve significant hazards consideration because operation of Fort Calhoun Station in accordance with this change would not:

1. involve a significant increase in the probability or consequence of an accident previously evaluated. This Change decreases the probability of an accident or event during the time the 161 KV transmission line is out of service. This is accomplished by clarifying the operability requirements of the remaining sources, removing the permissive to restart above 300° F with the 161 KV line out of service, and reducing challenges to safety systems.
2. create the possibility of a new or different kind of accident from any accident previously evaluated. It has been determined that a new or different type of accident is not created because no new or different modes of operation are proposed for the plant.
3. involve a significant reduction in the margin of safety. This change does not result in a decrease in the margin of safety associated with the normal source of auxiliary power because challenges to safety systems during the time the 161KV is out of service are minimized. Verifying power sources provides a higher level of assurance that alternate power sources are operable. Also, the unit will be shut down should either of the diesel generator be unavailable when the 161KV is not available.

Therefore, based on the above considerations, OPPD has determined that this change does not involve a significant hazards consideration.