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April 19, 1996

Docket No. 50-461

10CFR50.90

Document Control Desk
Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: Clinton Power Station Proposed Amendment of
Facility Operating License No. NPF-62 (LS-96-002)

Dear Madam or Sir:

Pursuant to 10CFR50.90, Illinois Power (IP) hereby applies for amendment of Facility Operating License No. NPF-62, Appendix A - Technical Specifications, for Clinton Power Station (CPS). This request consists of proposed changes to the following Technical Specifications (TS): "Primary Containment and Drywell Isolation Instrumentation," TS 3.3.6.1; "Secondary Containment Isolation Instrumentation," TS 3.3.6.2; "Control Room Ventilation System Instrumentation," TS 3.3.7.1; "Primary Containment Air Locks," TS 3.6.1.2; "Primary Containment Isolation Valves," TS 3.6.1.3; "Secondary Containment," TS 3.6.4.1; "Secondary Containment Isolation Dampers," TS 3.6.4.2; "Standby Gas Treatment," TS 3.6.4.3; "Control Room Ventilation," TS 3.7.3; and "Control Room AC System," TS 3.7.4.

The above TS are being revised to eliminate CORE ALTERATIONS as an applicable condition for which the associated Limiting Conditions for Operation (LCO) must be met. Consistent changes are also proposed for the associated ACTIONS in each of these LCOs, to reflect the changes in the applicable conditions. The intent of these proposed changes is to allow certain activities such as control rod venting, which is considered a CORE ALTERATION in MODE 5, to be performed without the requirements of the identified LCOs being met. These changes have the potential to allow the length of the upcoming refueling outage and subsequent refueling outages to be shortened for CPS with a negligible impact on nuclear safety. Because of the potential impact on the upcoming refueling outage, IP requests NRC's approval of the proposed changes by August 1, 1996.

A description of the proposed changes and the associated justification (including a basis for No Significant Hazards Consideration) are provided in Attachment 2. A marked-up copy of the affected pages from the current TS is provided in Attachment 3. As the TS

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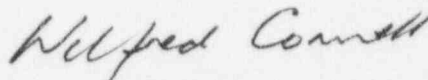
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Bases will also require revision consistent with the proposed TS changes, a marked-up copy of the affected pages from the current TS Bases is provided in Attachment 4. Following NRC approval of this request, IP will revise the TS Bases in accordance with TS 5.5.11, "Technical Specification Bases Control Program."

IP has also reviewed the proposed changes against the criteria of 10CFR51.22 for categorical exclusion from environmental impact consideration. The proposed changes do not involve a significant hazards consideration, or significantly increase the amounts or change the types of effluents that may be released offsite, nor do they significantly increase individual or cumulative occupational radiation exposures. Based on the foregoing, IP concludes that the proposed changes meet the criteria given in 10CFR51.22(c)(9) for a categorical exclusion from the requirements for an Environmental Impact Statement.

An affidavit supporting the facts set forth in this letter and its attachments is provided in Attachment 1.

Sincerely yours,



Wilfred Connell
Vice President

JLP/csm

Attachments

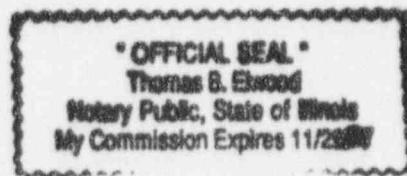
cc: NRC Clinton Licensing Project Manager
NRC Resident Office, V-690
Regional Administrator, Region III, USNRC
Illinois Department of Nuclear Safety

Wilfred Connell, being first duly sworn, deposes and says: That he is Vice President of Illinois Power; that the application for amendment of Facility Operating License NPF-62 has been prepared under his supervision and direction; that he knows the contents thereof, and that to the best of his knowledge and belief said letter and the facts contained therein are true and correct.

Date: This 19 day of April 1996.

Signed: Wilfred Connell
Wilfred Connell

STATE OF ILLINOIS }
 } SS.
DEWITT COUNTY }



Subscribed and sworn to before me this 19th day of April 1996.

Thomas B. Elwood
(Notary Public)

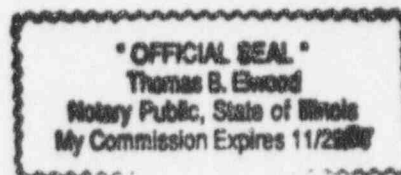
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Background

The proposed changes in this application for amendment of the Clinton Power Station (CPS) Operating License affect those Technical Specifications related to primary and secondary containment and the control room ventilation system, all of which are required to limit the effects or consequences of fission products assumed to be released following design basis accidents. The main function of the primary containment is to isolate and contain fission products released from the reactor primary system following a design basis accident (DBA) and to confine the postulated release of radioactive material to within limits. The secondary containment serves to contain, dilute, and hold up fission products that may leak from primary containment following a DBA. In conjunction with operation of the Standby Gas Treatment System and closure of certain valves (and dampers) in lines that penetrate the secondary containment, the secondary containment is designed to reduce the activity of the fission products prior to release to the environment and to isolate and contain fission products that could be released during certain operations inside primary containment when primary containment is not required to be operable, or that take place outside containment but within the secondary containment boundary (including the fuel building). Whereas the secondary and primary containment serve to limit or reduce the activity of radioactive material released to the environs, in the event of such a release the control room ventilation system provides a radiologically controlled environment from which the unit can be safely operated following a DBA.

In MODES 1, 2, and 3, a Loss of Coolant Accident (LOCA) could lead to a release of fission products to primary containment. The release can then, in turn, leak into secondary containment or to the environs via secondary containment bypass paths. Therefore, primary and secondary containment operability (including automatic isolation capability of the secondary containment bypass paths), as well as control room ventilation system operability, is required for these MODES. During shutdown conditions, i.e., during MODES 4 and 5 however, the probability and consequences of a LOCA are reduced due to the pressure and temperature limitations in these MODES, and therefore, primary containment is not required to be operable in these MODES. Likewise, secondary containment and the control room ventilation system are not required to be operable in these MODES for mitigation of a LOCA. However, there are certain other events that may occur during shutdown conditions which require OPERABILITY of the secondary containment and control room ventilation system. As noted above, secondary containment and control room ventilation system operability is required for certain specified operations or conditions from or during which an event could be postulated to lead to a significant release. These specified operations or conditions, as currently identified in the applicable Technical Specifications, are Operations with the Potential for Draining the Reactor Vessel (OPDRVs), CORE ALTERATIONS, or movement of irradiated fuel assemblies in the primary or secondary containment.

The functions listed in the following table (Table 1) are those currently identified in the Technical Specifications that are required to be OPERABLE during CORE ALTERATIONS, OPDRVs, and movement of irradiated fuel assemblies in the primary or secondary containment (as well as during MODES 1, 2, and 3).

Table 1

Technical Specification Title (Function or System Required to be Operable)	Technical Specification Number	Basis
Primary Containment and Drywell Isolation Instrumentation	3.3.6.1	Limit the release of fission products following a DBA
Secondary Containment Isolation Instrumentation	3.3.6.2	Limit the release of fission products following a DBA
Control Room Ventilation System Instrumentation	3.3.7.1	Provide a habitable environment for the control room operators following a DBA
Primary Containment Air Locks	3.6.1.2	Limit the release of fission products following a DBA
Primary Containment Isolation Valves	3.6.1.3	Limit the release of fission products following a DBA
Secondary Containment	3.6.4.1	Limit the release of fission products following a DBA
Secondary Containment Isolation Dampers	3.6.4.2	Limit the release of fission products following a DBA
Standby Gas Treatment System	3.6.4.3	Reduce the activity of fission products following a DBA
Control Room Ventilation System	3.7.3	Provide a habitable environment for the control room operators following a DBA
Control Room AC System	3.7.4	Provide a habitable environment for the control room operators following a DBA

Description of Proposed Changes

In accordance with 10CFR50.90, the following changes to the CPS Technical Specifications are being proposed:

Eliminate CORE ALTERATIONS as an applicable condition for the Technical Specifications listed in Table 1. This requires revising the APPLICABILITY sections for these Technical Specifications as well as the associated ACTIONS, to reflect the changes in the applicable conditions.

A marked-up copy of the current Technical Specifications reflecting the proposed changes is contained in Attachment 3. In addition, the changes to be incorporated into the TS Bases, consistent with the proposed TS changes, are indicated in Attachment 4.

CORE ALTERATIONS are defined as the movement of any fuel, sources, or reactivity control components within the reactor vessel with the vessel head removed and fuel in the vessel. (The condition, "During CORE ALTERATIONS," can therefore only apply during MODE 5, i.e., during refueling operations.) The requested changes will allow certain activities, such as control rod venting (which is considered a CORE ALTERATION in MODE 5), to be performed without the noted Technical Specifications having to be met. The requested changes do not affect the requirements associated with handling of irradiated fuel in primary or secondary containment, nor those associated with OPDRVs. In addition, the proposed changes do not affect those Technical Specifications for monitoring and controlling reactivity changes in the reactor core during MODE 5 (e.g., requirements for operability of the source range monitors and one-rod-out interlock and for maintaining shutdown margin). The requested changes will potentially allow the length of the upcoming refueling outage, and subsequent refueling outages, to be shortened with minimal impact on nuclear safety.

Justification for Proposed Changes

The proposed changes to the Technical Specifications only apply to CORE ALTERATIONS, a condition or operation that, by definition, can only apply during MODE 5, i.e., during refueling operations. No other MODES or any other specified conditions or operations are affected by the proposed changes.

As noted previously, the purpose or basis for each of the systems or functions (and their associated Technical Specifications) listed in Table 1 is to either:

- 1) Limit the release of fission products following a DBA, or
- 2) Reduce the activity level of fission products following a DBA, or
- 3) Provide a habitable environment for the control room operators following a DBA.

The two bounding DBAs for which credit is taken for primary and/or secondary containment operability are the LOCA [Reference: CPS Updated Safety Analysis Report (USAR) Section 15.6.5] and the Fuel Handling Accident (FHA) [Reference: CPS USAR Section 15.7.4]. For each of these two accidents, a significant release of radioactivity is postulated to occur.

With respect to the DBA-LOCA, all of the systems or functions listed in Table 1 are required to be OPERABLE in MODES 1, 2 and 3. As noted previously and in the Bases for the affected Technical Specifications, however, the probability and consequences of a DBA-LOCA are reduced in MODES 4 and 5 such that most systems or functions for mitigating the DBA-LOCA are not required in these MODES. Nevertheless, during shutdown conditions, reactor vessel draindown events that could lead to a LOCA may be postulated to occur, and therefore, the Table 1 functions or systems are also required to be operable during OPDRVs. The proposed changes do not involve any change to the applicability of the affected Technical Specifications relative to MODES 1, 2, 3 or OPDRVs. Therefore, deleting CORE ALTERATIONS from the applicability sections of the Technical Specifications listed in Table 1 does not impact any assumptions or requirements related to prevention or mitigation of the DBA-LOCA, as operability of the associated systems or functions will continue to be required during the relevant MODES, including during OPDRVs.

With respect to the DBA-FHA, i.e., the bounding fuel handling accident involving dropping an irradiated fuel bundle onto irradiated fuel, this event is precluded or mitigated by requiring applicable systems or functions to be OPERABLE "during movement of irradiated fuel assemblies in the primary or secondary containment." "During movement of irradiated fuel assemblies in the primary or secondary containment," as a specified applicability for the Technical Specifications listed in Table 1, is alone sufficient to require operability of those functions or systems needed to mitigate the consequences of the DBA-FHA. CORE ALTERATIONS is a separate condition and is not a necessary condition to be specified to ensure mitigation of the DBA-FHA. Thus, the proposed changes do not impact any assumptions or requirements related to mitigation of the DBA-FHA as operability of the associated systems or functions will continue to be required during the relevant MODES, i.e., during movement of irradiated fuel assemblies in the primary or secondary containment.

Other events to be considered for potential impact by the proposed Technical Specification changes are those that may be postulated to occur only during, or solely as a result of, CORE ALTERATIONS and which could lead to "a significant (radiological) release." To repeat, CORE ALTERATIONS is defined as the movement of any fuel, sources, or reactivity control components within the reactor vessel with the vessel head removed and fuel in the vessel. With respect to the movement of irradiated fuel within reactor vessel, such movement requires movement of irradiated fuel into or out of the reactor core. As noted previously, movement of irradiated fuel over, into, or out of the reactor core with the vessel head removed falls under the applicable condition "during

movement of irradiated fuel assemblies in the primary or secondary containment," which is unaffected by the proposed changes. With respect to the concern for reactivity changes in the reactor due to movement of fuel, sources, or reactivity control components (control rods), the current Technical Specification requirements for the source range monitors, one-rod-out interlock, shutdown margin and scram capability remain unchanged. Further, all of the requirements of Section 3.9 of the Technical Specifications, i.e., all of those required to be met to perform refueling operations, are unaffected by the proposed changes. The refueling equipment interlocks will, for example, continue to be required OPERABLE during in-vessel fuel movement with the associated refueling equipment per Technical Specification 3.9.1, to ensure prevention of inadvertent criticality. As an additional example, the requirements for having all control rods fully inserted when loading fuel assemblies into the core per Technical Specification 3.9.3 will remain unchanged. Therefore, the necessary controls for prevention and mitigation of reactivity events remain unchanged, and there are no credible scenarios or conditions leading to a significant release that could occur by the deletion of CORE ALTERATIONS as an applicable condition for the affected Technical Specifications. (The systems or functions affected by the proposed changes, i.e., those listed in Table 1, are not designed to prevent the occurrence of any postulated reactivity event.)

The only remaining concern or operation involving the movement of fuel is the handling of new or unirradiated fuel over the reactor core. This condition or operation falls under the handling of light loads (which also includes handling control rods). With respect to the requirements for secondary containment, and consistent with the scope of the Technical Specifications as addressed by 10CFR50.36, the handling of light loads is not addressed in the Technical Specifications but is separately addressed in the USAR. Per the USAR, certain controls or limitations are required to be met when handling light loads over irradiated fuel. (Under certain conditions, such operations may require secondary containment to be operable.) Regardless, the handling of a new fuel assembly (or control rod) over the reactor core is not a CORE ALTERATION, and therefore, deletion of CORE ALTERATIONS will have no impact on this condition, including the controls required to be in place for handling light loads. However, with respect to the movement of a new fuel assembly (or control rod) within the reactor vessel, which is a CORE ALTERATION, the controls for prevention of reactivity events, as noted above, remain unchanged.

As already indicated, approval of the proposed changes will enable certain activities constituting CORE ALTERATIONS to be performed without requiring the noted Technical Specifications to be met. This can result in refueling outages being shortened, depending on the scheduling impact of requiring secondary containment operability. One of the major conditions or restraints that is factored into the planning of refueling outages is when secondary containment is required since this condition affects ingress and egress into the secondary containment, what doors and penetrations can be open to support work activities, etc. Typically, some tasks and activities to be performed during an outage must be planned within certain "windows" of opportunity when secondary containment is not

required. Since control rod venting during MODE 5 (one rod at a time with the one-rod-out interlock in effect) is an operation that constitutes a CORE ALTERATION, control rod venting under the current Technical Specifications requires secondary containment to be operable. Scheduling efficiencies could be gained if CORE ALTERATIONS, like control rod venting during MODE 5, could be scheduled for performance without requiring secondary containment to be operable at the same time. In RF-6, for example, the scheduled duration of the outage could be reduced by several hours if control rod venting could be performed just prior to inservice leak/hydrostatic testing of the reactor pressure vessel (per ASME Section XI) without requiring secondary containment to be operable as other activities are performed in parallel. Otherwise, all control rod venting will have to be performed at the end of the outage when control rod venting becomes a restraint to plant startup, and thus becomes "critical path."

Basis for No Significant Hazards Consideration

According to 10CFR50.92, a proposed change to the operating license (Technical Specifications) involves no significant hazards consideration if operation of the facility in accordance with the proposed change would not: (1) Involve a significant increase in the probability or consequences of an accident previously evaluated, or (2) Create the possibility of a new or different kind of accident from any accident previously evaluated, or (3) Involve a significant reduction in a margin of safety. The proposed changes are evaluated against each of these criterion below.

1. The proposed changes eliminate CORE ALTERATIONS as an applicable condition requiring operability of the primary and secondary containment and control room ventilation system. As stated in the BASES for the associated Technical Specifications, operability of these systems is primarily required for mitigation of the DBA-FHA and DBA-LOCA. The performance of CORE ALTERATIONS alone is neither a precursor to, nor a condition during which these DBAs are postulated to occur. The proposed changes only delete CORE ALTERATIONS as an applicable condition for the affected Technical Specifications. All other applicable MODES or specified conditions, including OPDRVs and the movement of irradiated fuel assemblies within the primary or secondary containment, remain unchanged. Further, the limitations placed on the handling of light loads are also unchanged. The Technical Specifications (and the separate requirements imposed on the handling of light loads) will thus continue to require that systems or functions designed to mitigate design-basis/previously evaluated accidents are OPERABLE during the relevant operating MODES or conditions. On the basis of the above, it is concluded that the requested amendment will not increase the probability or consequences of any accident previously evaluated.

2. The proposed changes do not involve any modification to the plant design or to the operation of plant systems (except to determine when certain analyzed accident-mitigating systems or features are required to be OPERABLE). The failure modes considered for the proposed changes are the same as those previously considered, therefore, it can be concluded that no new failure modes will be created. On this basis, the proposed amendment will not create the possibility of a new or different kind of accident from any accident previously evaluated.
3. The changes being made to eliminate CORE ALTERATIONS as an applicable condition for which certain LCOs must be met, do not eliminate the requirements for operability of those systems or features assumed to mitigate design-basis or analyzed accidents during the applicable MODES when such systems or features are assumed to be available for performing their mitigating function. The safety margins assumed or established by the accident analyses for those design-basis events (as described in the accident analyses of the CPS USAR) therefore remain unchanged. Further, the proposed changes do not impact the controls imposed on the handling of light loads (including unirradiated fuel assemblies) for ensuring that such activities cannot result in an event that yields consequences more severe than those calculated for the DBA-FHA. With respect to reactivity concerns during refueling operations (MODE 5), all systems or features required to be OPERABLE for precluding inadvertent criticality and monitoring reactivity changes will continue to be required OPERABLE as per the current Technical Specification requirements. The deletion of CORE ALTERATIONS as an applicable condition only applies to the noted systems which do not contribute to precluding reactivity events. Based on the above, the proposed changes do not involve a significant reduction in the margin of safety.

Based upon the foregoing, IP concludes that the proposed changes do not involve a significant hazards consideration.

Marked-Up Pages from Facility Operating
License No. NPF-62 and the Technical Specifications