b. The Airlock Doors are controlled in the following manner:

1. A minimum of one door in each airlock is closed, or
2. Both airlock doors may be open provided:
   a. One door in each airlock is OPERABLE*
   b. Refueling cavity level is greater than 23 feet above the fuel, and
   c. A designated individual is available at all times to close the airlock if required.

REFUELING OPERATIONS

CONTAINMENT BUILDING PENETRATIONS

LIMITING CONDITION FOR OPERATION

3.9.4 The containment building penetrations shall be in the following status:

a. The equipment door closed and held in place by a minimum of four bolts,

b. ~~A minimum of one door in each airlock is closed, and~~

c. Each penetration providing direct access from the containment atmosphere to the outside atmosphere shall be either:

1. Closed by an isolation valve, blind flange, or manual valve, or

2. Be capable of being closed by an OPERABLE automatic Containment Purge and Exhaust isolation valve.

APPLICABILITY: During CORE ALTERATIONS or movement of irradiated fuel within the containment.

ACTION:

With the requirements of the above specification not satisfied, immediately suspend all operations involving CORE ALTERATIONS or movement of irradiated fuel in the containment building. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.4 Each of the above required containment building penetrations shall be determined to be either in its closed/isolated condition or capable of being closed by an OPERABLE automatic Containment Purge and Exhaust isolation valve within 100 hours prior to the start of and at least once per 7 days during CORE ALTERATIONS or movement of irradiated fuel in the containment building by:

a. Verifying the penetrations are in their closed/isolated condition, or

b. Testing the Containment Purge and Exhaust isolation valves per the applicable portions of Specification 4.6.3.1.2.

* FOR THE PURPOSE OF THIS SPECIFICATION, AN OPERABLE AIRLOCK DOOR IS A DOOR THAT IS CAPABLE OF BEING CLOSED. CABLES OR HOSES TRANSVERSING THE AIRLOCK SHALL BE DESIGNED TO ALLOW FOR REMOVAL IN A TIMELY MANNER (E.G., QUICK DISCONNECTS). and secured.

COOK NUCLEAR PLANT

3/4.9.1 BORON CONCENTRATION

The limitations on reactivity conditions during REFUELING ensure that: 1) the reactor will remain subcritical during CORE ALTERATIONS, and 2) a uniform boron concentration is maintained for reactivity control in the water volume having direct access to the reactor vessel. These limitations are consistent with the initial conditions assumed for the boron dilution incident in the accident analyses. The value of 0.95 or less for K_{eff} includes a 1 percent delta k/k conservative allowance for uncertainties. Similarly, the boron concentration value of 2000 ppm or greater includes a conservative uncertainty allowance of 50 ppm boron. The boron concentration requirement of specification 3.9.1.b has been conservatively increased to 2400 ppm to agree with the minimum concentration of the RWST.

3/4.9.2 INSTRUMENTATION

The OPERABILITY of the source range neutron flux monitors ensures that redundant monitoring capability is available to detect changes in the reactivity condition of the core.

3/4.9.3 DECAY TIME

The minimum requirement for reactor subcriticality prior to movement of irradiated fuel assemblies in the reactor pressure vessel ensures that sufficient time has elapsed to allow the radioactive decay of the short lived fission products. This decay time is consistent with the assumptions used in the accident analyses.

3/4.9.4 CONTAINMENT BUILDING PENETRATIONS

The requirements on containment building penetration closure and OPERABILITY ensure that a release of radioactive material within containment will be restricted from leakage to the environment. The OPERABILITY and closure restrictions are sufficient to restrict radioactive material release from a fuel element rupture based upon the lack of containment pressurization potential while in the REFUELING MODE.

3/4.9.5 COMMUNICATIONS

The requirement for communications capability ensures that refueling station personnel can be promptly informed of significant changes in the facility status or core reactivity conditions during CORE ALTERATIONS.

The specific guidelines to allow both airlock doors to remain open during CORE ALTERATIONS were developed to ensure that the assumptions for restricting radioactive leakage to the environment remained valid. The guidelines established for maintaining both airlock doors open include: 1) one door in each airlock is OPERABLE, 2) refueling cavity level is greater than 23 feet above the fuel, and 3) a designated individual is continiously available to close an airlock door (if required). An OPERABLE airlock door consists of a door capable of being closed and secured. Additionally, cables or hoses transversing the airlock must be designed in a manner that allows timely removal (e.g., quick disconnects). The requirement that the refueling cavity level is greater than 23 feet above the fuel ensures consistency with the assumptions of Specifications 3/4.9.10 and 3/4.9.11.

b. The airlock doors are controlled in the following manner:

1. A minimum one door in each airlock is closed, or

2. Both airlock doors may be open provided:

a. one door in each airlock is OPERABLE*,

b. Refueling cavity level is greater than 23 feet above the fuel, and

c. A designated individual is available at all times to close the airlock if required.

REFUELING OPERATIONS

CONTAINMENT BUILDING PENETRATIONS

LIMITING CONDITION FOR OPERATION

3.9.4 The containment building penetrations shall be in the following status:

a. The equipment door closed and held in place by a minimum of four bolts,

b. ~~A minimum of one door in each airlock is closed, and~~

c. Each penetration providing direct access from the containment atmosphere to the outside atmosphere shall be either:

1. Closed by an isolation valve, blind flange, or manual valve, or

2. Be capable of being closed by an OPERABLE automatic Containment Purge and Exhaust isolation valve.

APPLICABILITY: During CORE ALTERATIONS or movement of irradiated fuel within the containment.

ACTION:

With the requirements of the above specification not satisfied, immediately suspend all operations involving CORE ALTERATIONS or movement of irradiated fuel in the containment building. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.4 Each of the above required containment building penetrations shall be determined to be either in its closed/isolated condition or capable of being closed by an OPERABLE automatic Containment Purge and Exhaust isolation valve within 100 hours prior to the start of and at least once per 7 days during CORE ALTERATIONS or movement of irradiated fuel in the containment building by:

a. Verifying the penetrations are in their closed/isolated condition, or

b. Testing the Containment Purge and Exhaust isolation valves per the applicable portions of Specification 4.6.3.1.2.

* FOR THE PURPOSE OF THIS SPECIFICATION, AN OPERABLE AIRLOCK DOOR IS A DOOR THAT IS CAPABLE OF BEING CLOSED. CABLES OR HOSES TRANSVERSING THE AIRLOCK SHALL BE DESIGNED TO ALLOW FOR RENOVAL IN A TIMELY MANNER (E.G., QUICK DISCONNECTS).

and secured

3/4.9.1 BORON CONCENTRATION

The limitations on reactivity conditions during REFUELING ensure that: 1) the reactor will remain subcritical during CORE ALTERATIONS, and 2) a uniform boron concentration is maintained for reactivity control in the water volume having direct access to the reactor vessel. These limitations are consistent with the initial conditions assumed for the boron dilution incident in the accident analyses. The value of 0.95 or less for K_{eff} includes a 1 percent delta k/k conservative allowance for uncertainties. Similarly, the boron concentration value of 2000 ppm or greater includes a conservative uncertainty allowance of 50 ppm boron. The boron concentration requirement of specification 3.9.1.b has been conservatively increased to 2400 ppm to agree with the minimum concentration of the RWST.

3/4.9.2 INSTRUMENTATION

The OPERABILITY of the source range neutron flux monitors ensures that redundant monitoring capability is available to detect changes in the reactivity condition of the core.

3/4.9.3 DECAY TIME

The minimum requirement for reactor subcriticality prior to movement of irradiated fuel assemblies in the reactor pressure vessel ensures that sufficient time has elapsed to allow the radioactive decay of the short lived fission products. This decay time is consistent with the assumptions used in the accident analyses.

3/4.9.4 CONTAINMENT BUILDING PENETRATIONS

The requirements on containment building penetration closure and OPERABILITY ensure that a release of radioactive material within containment will be restricted from leakage to the environment. The OPERABILITY and closure restrictions are sufficient to restrict radioactive material release from a fuel element rupture based upon the lack of containment pressurization potential while in the REFUELING MODE.

3/4.9.5 COMMUNICATIONS

The requirement for communications capability ensures that refueling station personnel can be promptly informed of significant changes in the facility status or core reactivity conditions during CORE ALTERATIONS.

The specific guidelines to allow both airlock doors to remain open during CORE ALTERATIONS were developed to ensure that the assumptions for restricting radioactive leakage to the environment remained valid. The guidelines established for maintaining both airlock doors open include: 1) one door in each airlock is OPERABLE, 2) refueling cavity level is greater than 23 feet above the fuel, and 3) a designated individual is continuously available to close an airlock door (if required). An OPERABLE airlock door consists of a door capable of being closed and secured. Additionally, cables or hoses transversing the airlock must be designed in a manner that allows timely removal (e.g., quick disconnects). The requirement that the refueling cavity level is greater than 23 feet above the fuel ensures consistency with the assumptions of Specifications 3/4.9.10 and 3/4.9.11.

COOK NUCLEAR PLANT - UNIT 2

ATTACHMENT 3 TO AEP:NRC:1220

PROPOSED REVISED
TECHNICAL SPECIFICATION PAGES

CONTAINMENT BUILDING PENETRATIONS

LIMITING CONDITION FOR OPERATION

3.9.4 The containment building penetrations shall be in the following status:

a. The equipment door closed and held in place by a minimum of four bolts,

b. The airlock doors are controlled in the following manner:

1. A minimum of one door in each airlock is closed, or

2. Both airlock doors may be open provided:

a. One door in each airlock is OPERABLE*,

b. Refueling cavity level is greater than 23 feet above the fuel, and

c. A designated individual is available at all times to close the airlock if required.

c. Each penetration providing direct access from the containment atmosphere to the outside atmosphere shall be either:

1. Closed by an isolation valve, blind flange, or manual valve, or

2. Be capable of being closed by an OPERABLE automatic Containment Purge and Exhaust isolation valve.

APPLICABILITY: During CORE ALTERATIONS or movement of irradiated fuel within the containment.

ACTION:

With the requirements of the above specification not satisfied, immediately suspend all operations involving CORE ALTERATIONS or movement of irradiated fuel in the containment building. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.4 Each of the above required containment building penetrations shall be determined to be either in its closed/isolated condition or capable of being closed by an OPERABLE automatic Containment Purge and Exhaust isolation valve within 100 hours prior to the start of and at least once per 7 days during CORE ALTERATIONS or movement of irradiated fuel in the containment building by:

a. Verifying the penetrations are in their closed/isolated condition, or

b. Testing the Containment Purge and Exhaust isolation valves per the applicable portions of Specification 4.6.3.1.2.

---

* For the purpose of this Specification, an OPERABLE airlock door is a door that is capable of being closed and secured. Cables or hoses transversing the airlock shall be designed to allow for removal in a timely manner (e.g., quick disconnects).

3/4.9.1 BORON CONCENTRATION

The limitations on reactivity conditions during REFUELING ensure that: 1) the reactor will remain subcritical during CORE ALTERATIONS, and 2) a uniform boron concentration is maintained for reactivity control in the water volume having direct access to the reactor vessel. These limitations are consistent with the initial conditions assumed for the boron dilution incident in the accident analyses. The value of 0.95 or less for K_{eff} includes a 1 percent delta k/k conservative allowance for uncertainties. Similarly, the boron concentration value of 2000 ppm or greater includes a conservative uncertainty allowance of 50 ppm boron. The boron concentration requirement of specification 3.9.1.b has been conservatively increased to 2400 ppm to agree with the minimum concentration of the RWST.

3/4.9.2 INSTRUMENTATION

The OPERABILITY of the source range neutron flux monitors ensures that redundant monitoring capability is available to detect changes in the reactivity condition of the core.

3/4.9.3 DECAY TIME

The minimum requirement for reactor subcriticality prior to movement of irradiated fuel assemblies in the reactor pressure vessel ensures that sufficient time has elapsed to allow the radioactive decay of the short lived fission products. This decay time is consistent with the assumptions used in the accident analyses.

3/4.9.4 CONTAINMENT BUILDING PENETRATIONS

The requirements on containment building penetration closure and OPERABILITY ensure that a release of radioactive material within containment will be restricted from leakage to the environment. The OPERABILITY and closure restrictions are sufficient to restrict radioactive material release from a fuel element rupture based upon the lack of containment pressurization potential while in the REFUELING MODE.

The specific guidelines to allow both airlock doors to remain open during CORE ALTERATIONS were developed to ensure that the assumptions for restricting radioactive leakage to the environment remained valid. The guidelines established for maintaining both airlock doors open include: 1) one door in each airlock is OPERABLE, 2) refueling cavity level is greater than 23 feet above the fuel, and 3) a designated individual is continuously available to close an airlock door (if required). An OPERABLE airlock door consists of a door capable of being closed and secured. Additionally, cables or hoses transversing the airlock must be designed in a manner that allows timely removal (e.g., quick disconnects). The requirement that the refueling cavity level is greater than 23 feet above the fuel ensures consistency with the assumptions of Specifications 3/4.9.10 and 3/4.9.11.

3/4.9.5 COMMUNICATIONS

The requirement for communications capability ensures that refueling station personnel can be promptly informed of significant changes in the facility status or core reactivity conditions during CORE ALTERATIONS.

CONTAINMENT BUILDING PENETRATIONS

LIMITING CONDITION FOR OPERATION

3.9.4 The containment building penetrations shall be in the following status:

a. The equipment door closed and held in place by a minimum of four bolts,

b. The airlock doors are controlled in the following manner:

1. A minimum of one door in each airlock is closed, or

2. Both airlock doors may be open provided:

a. One door in each airlock is OPERABLE*,

b. Refueling cavity level is greater than 23 feet above the fuel, and

c. A designated individual is available at all times to close the airlock if required.

c. Each penetration providing direct access from the containment atmosphere to the outside atmosphere shall be either:

1. Closed by an isolation valve, blind flange, or manual valve, or

2. Be capable of being closed by an OPERABLE automatic Containment Purge and Exhaust isolation valve.

APPLICABILITY: During CORE ALTERATIONS or movement of irradiated fuel within the containment.

ACTION:

With the requirements of the above specification not satisfied, immediately suspend all operations involving CORE ALTERATIONS or movement of irradiated fuel in the containment building. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.4 Each of the above required containment building penetrations shall be determined to be either in its closed/isolated condition or capable of being closed by an OPERABLE automatic Containment Purge and Exhaust isolation valve within 100 hours prior to the start of and at least once per 7 days during CORE ALTERATIONS or movement of irradiated fuel in the containment building by:

a. Verifying the penetrations are in their closed/isolated condition, or

b. Testing the Containment Purge and Exhaust isolation valves per the applicable portions of Specification 4.6.3.1.2.

---

* For the purpose of this Specification, an OPERABLE airlock door is a door that is capable of being closed and secured. Cables or hoses transversing the airlock shall be designed to allow for removal in a timely manner (e.g., quick disconnects).

3/4.9.1 BORON CONCENTRATION

The limitations on reactivity conditions during REFUELING ensure that: 1) the reactor will remain subcritical during CORE ALTERATIONS, and 2) a uniform boron concentration is maintained for reactivity control in the water volume having direct access to the reactor vessel. These limitations are consistent with the initial conditions assumed for the boron dilution incident in the accident analyses. The value of 0.95 or less for K_{eff} includes a 1 percent delta k/k conservative allowance for uncertainties. Similarly, the boron concentration value of 2000 ppm or greater includes a conservative uncertainty allowance of 50 ppm boron. The boron concentration requirement of specification 3.9.1.b has been conservatively increased to 2400 ppm to agree with the minimum concentration of the RWST.

3/4.9.2 INSTRUMENTATION

The OPERABILITY of the source range neutron flux monitors ensures that redundant monitoring capability is available to detect changes in the reactivity condition of the core.

3/4.9.3 DECAY TIME

The minimum requirement for reactor subcriticality prior to movement of irradiated fuel assemblies in the reactor pressure vessel ensures that sufficient time has elapsed to allow the radioactive decay of the short lived fission products. This decay time is consistent with the assumptions used in the accident analyses.

3/4.9.4 CONTAINMENT BUILDING PENETRATIONS

The requirements on containment building penetration closure and OPERABILITY ensure that a release of radioactive material within containment will be restricted from leakage to the environment. The OPERABILITY and closure restrictions are sufficient to restrict radioactive material release from a fuel element rupture based upon the lack of containment pressurization potential while in the REFUELING MODE.

The specific guidelines to allow both airlock doors to remain open during CORE ALTERATIONS were developed to ensure that the assumptions for restricting radioactive leakage to the environment remained valid. The guidelines established for maintaining both airlock doors open include: 1) one door in each airlock is OPERABLE, 2) refueling cavity level is greater than 23 feet above the fuel, and 3) a designated individual is continuously available to close an airlock door (if required). An OPERABLE airlock door consists of a door capable of being closed and secured. Additionally, cables or hoses transversing the airlock must be designed in a manner that allows timely removal (e.g., quick disconnects). The requirement that the refueling cavity level is greater than 23 feet above the fuel ensures consistency with the assumptions of Specifications 3/4.9.10 and 3/4.9.11.

3/4.9.5 COMMUNICATIONS

The requirement for communications capability ensures that refueling station personnel can be promptly informed of significant changes in the facility status or core reactivity conditions during CORE ALTERATIONS.