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Docket Number 50-346

10 CFR 50.90

License Number NPF-3

Serial Number 3099

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Subject: Davis-Besse Nuclear Power Station
License Amendment Application to Revise Technical Specification Requirements for Refueling Operations and Design Features to Reflect the Status of the Spent Fuel Pool Rerack Project (License Amendment Request No. 02-0003)

Ladies and Gentlemen:

Pursuant to 10 CFR 50.90, the following amendment is requested for the Davis-Besse Nuclear Power Station, Unit 1 (DBNPS). The proposed amendment would revise the Technical Specifications related to fuel handling and storage. Specifically, the proposed change would revise Technical Specification (TS) 3/4.9.11, "Storage Pool Water Level," TS 3/4.9.12, "Storage Pool Ventilation," TS 3/4.9.13, "Spent Fuel Assembly Storage," and TS 5.6, "Fuel Storage," to reflect that spent fuel storage racks are no longer installed in the cask pit or transfer pit. Fuel storage racks were permitted to be temporarily installed in the cask pit and transfer pit during a project to increase spent fuel pool storage capacity. All temporarily installed fuel storage racks have now been moved into the spent fuel pool. Additionally, the proposed changes would relocate the requirements of TS 3/4.9.7, "Crane Travel - Fuel Handling Building," to the DBNPS Technical Requirements Manual (TRM). The proposed changes to TS 3/4.9.13 and TS 5.6 would also reflect that there are no longer low-density fuel storage racks in the spent fuel pool. The proposed changes would make TS requirements consistent with the current fuel storage design.

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The DBNPS staff has evaluated the proposed changes to the Technical Specifications against the criteria of 10 CFR 50.92(c) and concludes that this amendment would not involve a significant hazards consideration.

Approval of the proposed amendment is requested by February 1, 2006, in order to have the changes available for the fourteenth refueling outage, which is currently scheduled to commence in March 2006. Once approved, the amendment shall be implemented within 120 days.

The proposed changes have been reviewed by the DBNPS onsite and offsite review committees. Enclosure 1 includes an evaluation of the proposed amendment. A list of regulatory commitments made in this letter is included in Enclosure 2.

Should you have any questions or require additional information, please contact Mr. Henry L. Hegrat, Supervisor - Licensing, at (330) 315-6944.

The statements contained in this submittal, including its associated enclosures and attachments, are true and correct to the best of my knowledge and belief. I am authorized by the FirstEnergy Nuclear Operating Company to make this submittal. I declare under penalty of perjury that the foregoing is true and correct.

Executed on April 22, 2005

MAR

Enclosures

cc: J. L. Caldwell, Regional Administrator, NRC Region III
J. B. Hopkins, NRC/NRR Senior Project Manager
N. Dragani, Executive Director, Ohio Emergency Management Agency, State of Ohio (NRC Liaison)
C. S. Thomas, NRC Region III, DB-1 Senior Resident Inspector
Utility Radiological Safety Board

Docket Number 50-346
License Number NPF-3
Serial Number 3099
Enclosure 1

DAVIS-BESSE NUCLEAR POWER STATION
EVALUATION
FOR
LICENSE AMENDMENT REQUEST NUMBER 02-0003

(38 pages follow)

DAVIS-BESSE NUCLEAR POWER STATION
EVALUATION
FOR
LICENSE AMENDMENT REQUEST NUMBER 02-0003

Subject: License Amendment Application to Revise Technical Specification Requirements for Refueling Operations and Design Features to Reflect the Status of the Spent Fuel Pool Rerack Project

1.0 DESCRIPTION

This letter is a request to amend the Davis-Besse Nuclear Power Station, Unit Number 1 Facility Operating License Number NPF-3.

The proposed amendment would revise the Technical Specifications related to fuel handling and storage. Specifically, the proposed change would revise Technical Specification (TS) 3/4.9.11, "Storage Pool Water Level," TS 3/4.9.12, "Storage Pool Ventilation," TS 3/4.9.13, "Spent Fuel Assembly Storage," and TS 5.6, "Fuel Storage," to reflect that spent fuel storage racks are no longer installed in the cask pit or transfer pit. Fuel storage racks were permitted to be temporarily installed in the cask pit and transfer pit during a project to increase spent fuel pool storage capacity. All temporarily installed fuel storage racks have now been moved into the spent fuel pool. Additionally, the proposed changes would relocate the requirements of TS 3/4.9.7, "Crane Travel - Fuel Handling Building," to the DBNPS Technical Requirements Manual (TRM). The proposed changes to TS 3/4.9.13 and TS 5.6 would also reflect that there are no longer low-density fuel storage racks in the spent fuel pool. The proposed changes will make TS requirements consistent with the current fuel storage design.

2.0 PROPOSED CHANGE

The proposed changes are shown in the marked-up TS pages in Attachment 1 and affect TS 3/4.9.7, "Crane Travel - Fuel Handling Building;" TS 3/4.9.11, "Storage Pool Water Level;" TS 3/4.9.12, "Storage Pool Ventilation;" TS 3/4.9.13, "Spent Fuel Assembly Storage;" and TS 5.6, "Fuel Storage." Each of the proposed changes is described in detail below.

TS 3/4.9.7, "Crane Travel - Fuel Handling Building"

The proposed amendment would delete TS 3/4.9.7 from the Technical Specifications and relocate it to the TRM. TS Limiting Condition for Operation (LCO) 3.9.7 requires:

> Loads in excess of 2430 pounds shall be prohibited from travel over fuel assemblies in the spent fuel pool, cask pit*, or transfer pit.

The TS is applicable with fuel assemblies and water in the spent fuel pool, cask pit, or transfer pit. TS Surveillance Requirement (SR) 4.9.7 states:

> The weight of each load, other than a fuel assembly, shall be verified to be $\leq$ 2430 pounds prior to moving it over fuel assemblies in the spent fuel pool, cask pit*, or transfer pit.

The asterisked note affecting this LCO and SR states:

> An impact cover weighing in excess of 2430 pounds may be moved over fuel assemblies in the cask pit provided that administrative controls are established. Other loads in excess of 2430 pounds may be moved over fuel assemblies in the cask pit provided: 1) an

impact cover is installed, and 2) administrative controls are established to limit the load to 17,530 pounds and to limit the height that the load may travel over the impact cover.

The requirements of TS 3/4.9.7 will be relocated to the TRM upon implementation of the amendment. A change to page VIII of the TS Index is also proposed, reflecting the deletion of TS 3/4.9.7.

TS 3/4.9.11, "Storage Pool Water Level"

The proposed amendment would revise TS 3/4.9.11 to reflect the removal of the allowance for temporary location of storage racks in the cask and transfer pits. TS LCO 3.9.11 currently states:

> As a minimum, 23 feet of water shall be maintained over the top of irradiated fuel assemblies seated in the storage racks in the spent fuel pool, cask pit, or transfer pit.

The proposed change to TS LCO 3.9.11 would remove the reference to storage racks in the cask and transfer pits. The revised TS LCO 3.9.11 would state:

> As a minimum, 23 feet of water shall be maintained over the top of irradiated fuel assemblies seated in the storage racks in the spent fuel pool.

A similar change would be made to remove the reference to storage racks in the cask and transfer pits from the Applicability statement of TS 3.9.11. The revised applicability statement would state:

> Whenever irradiated fuel assemblies are in the spent fuel pool.

TS SR 4.9.11 would also be revised to remove the reference to storage racks in the cask and transfer pits. The revised TS SR 4.9.11 would state:

> The water level in the spent fuel pool shall be determined to be at least its minimum required depth at least once per 7 days when irradiated fuel assemblies are in the spent fuel pool.

TS 3/4.9.12, "Storage Pool Ventilation"

TS LCO 3.9.12 specifies requirements for the emergency ventilation systems servicing the storage pool area. The Applicability statement for TS LCO 3.9.12 states:

> Whenever irradiated fuel is in the spent fuel pool, cask pit, or transfer pit, or during CORE ALTERATIONS or movement of irradiated fuel within the containment with the containment equipment hatch open.

The proposed change would remove the reference to storage racks in the cask and transfer pits. The revised Applicability statement would state:

> Whenever irradiated fuel is in the spent fuel pool, or during CORE ALTERATIONS or movement of irradiated fuel within the containment with the containment equipment hatch open.

Similar changes would also be made to TS LCO 3.9.12 Action a and Action c.

The proposed change would revise Action a to state:

> With one emergency ventilation system servicing the storage pool area inoperable, fuel movement within the spent fuel pool or crane operation with loads over the spent fuel pool may proceed provided the OPERABLE emergency ventilation system servicing the storage pool area is in operation and discharging through at least one train of HEPA filters and charcoal adsorbers.

The proposed change would revise Action c to state:

> With no emergency ventilation system servicing the storage pool area OPERABLE, suspend CORE ALTERATIONS and all operations involving movement of fuel within the containment or spent fuel pool, or crane operation with loads over the spent fuel pool, until at least one system is restored to OPERABLE status. CORE ALTERATIONS and fuel movement within containment may proceed provided the containment equipment hatch cover is closed and held in place by a minimum of four bolts.

TS 3/4.9.13, "Spent Fuel Assembly Storage"

TS LCO 3.9.13 specifies requirements for the placement of fuel assemblies in the spent fuel storage racks. TS LCO 3.9.13 currently states:

> Fuel assemblies shall be placed in the spent fuel storage racks in accordance with the following criteria:
>
> a. Fuel assemblies stored in the spent fuel pool shall meet the criteria shown in Figure 3.9-1, when located in the low density spent fuel storage racks.
>
> b. Fuel assemblies stored in the cask pit shall meet the criteria shown in Figure 3.9-2, when located in the high density spent fuel storage racks.
>
> c. Fuel assemblies stored in the spent fuel pool or transfer pit shall meet the criteria shown in Figure 3.9-3, when located in the high density spent fuel storage racks.

The proposed change would revise TS LCO 3.9.13 to state:

> Fuel assemblies stored in the spent fuel pool shall be placed in the spent fuel storage racks in accordance with the criteria shown in Figure 3.9-1.

The proposed change would delete TS Figure 3.9-1, "Burnup vs. Enrichment Curves for the Davis-Besse Low Density Spent Fuel Pool Storage Racks," and TS Figure 3.9-2, "Burnup vs. Enrichment Curve for the Davis-Besse High Density Cask Pit Storage Racks." Existing TS Figure 3.9-3, "Burnup vs. Enrichment Curves for the Davis-Besse High Density Spent Fuel Pool and Transfer Pit Storage Racks," would be renumbered and renamed Figure 3.9-1, "Burnup vs. Enrichment Curves for the Davis-Besse High Density Spent Fuel Pool Storage Racks."

The proposed change would revise the applicability statement for TS LCO 3.9.13 to state:

> Whenever fuel assemblies are in the spent fuel pool.

The proposed change would also revise the Action statement for TS LCO 3.9.13 to remove references to the cask pit, transfer pit, and the deleted figures. The revised TS LCO 3.9.13 Action statement would state:

> With the requirement of the above specification not satisfied, suspend all other fuel movement within the spent fuel pool and move the non-complying fuel assemblies to allowable locations in accordance with Figure 3.9-1. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

TS SR 4.9.13.1 would also be revised to remove references to the cask pit, transfer pit, and the deleted figures. The revised SR 4.9.13.1 would state:

> Prior to storing a fuel assembly in the spent fuel pool, verify by administrative means that the initial enrichment and burnup of the fuel assembly are in accordance with Figure 3.9-1.

<u>TS 5.6, "Fuel Storage"</u>

The proposed change would delete current TS 5.6.1.1 to reflect that there are no longer low density spent fuel storage racks at the DBNPS. TS 5.6.1.1 currently states:

> 5.6.1.1 The low density spent fuel pool storage racks are designed and shall be maintained with:
>
> a. A K_{eff} equivalent to less than or equal to 0.95 when flooded with unborated water, which includes a conservative allowance of 1% delta k/k for calculation uncertainty.
>
> b. A rectangular array of stainless steel cells spaced 12 31/32 inches on centers in one direction and 13 3/16 inches on centers in the other direction. Fuel assemblies stored in the spent fuel pool shall be placed in a stainless steel cell of 0.125 inches nominal thickness or in a failed fuel container.
>
> c. Fuel assemblies stored in the spent fuel pool in accordance with Technical Specification 3.9.13.

Existing TS 5.6.1.2 would be renumbered to TS 5.6.1.1. Existing TS 5.6.1.3 would be renumbered to TS 5.6.1.2 and revised to reflect the removal of storage racks from the cask and transfer pits. The new TS 5.6.1.2 would state:

> The high density spent fuel pool storage racks are designed and shall be maintained with:
>
> a. A K_{eff} equivalent to less than or equal to 0.95 when flooded with unborated water, which includes a conservative allowance for manufacturing tolerances and calculation uncertainty.
>
> b. A rectangular array of stainless steel cells with walls of 0.075 inches nominal thickness, spaced a nominal 9.22 inches on center in both directions. Boral neutron absorber material is utilized between each cell for criticality considerations.
>
> c. Fuel assemblies stored in the spent fuel pool in accordance with Technical Specification 3.9.13.

TS 5.6.3 would be revised to reflect that fuel is no longer stored in the transfer and cask pits. The revised TS 5.6.3 would state:

> The spent fuel storage pool is designed and shall be maintained with a storage capacity limited to no more than 1624 fuel assemblies.

Although TS 5.6.2, "Drainage," contains references to the cask pit and transfer pit, the requirements for the cask and transfer pit remain appropriate to prevent inadvertent draining of the spent fuel pool. Therefore, TS 5.6.2 is considered acceptable as-is, and no change to TS 5.6.2 is proposed.

Summary

In summary, the proposed amendment would revise the Technical Specifications related to fuel handling and storage to reflect that spent fuel is no longer stored in the cask pit or transfer pit. Fuel storage racks were permitted to be temporarily installed in the cask pit and transfer pit during a project to increase spent fuel pool storage capacity. All temporarily installed fuel storage racks have now been moved into the spent fuel pool. Additionally, the proposed changes would relocate the requirements of Technical Specification (TS) 3/4.9.7, "Crane Travel - Fuel Handling Building," to the DBNPS Technical Requirements Manual (TRM). The proposed amendment would also reflect that there are no longer low-density fuel storage racks in the spent fuel pool. The proposed changes will make TS requirements consistent with the current fuel storage design.

Associated changes to the TS Bases are being made in support of this application. The proposed changes are identified in Attachment 3. These Bases changes are being processed under the DBNPS TS Bases Control Program and are being provided for information only.

3.0 BACKGROUND

Reracking Project

The DBNPS has pursued a spent fuel pool rerack project to increase the spent fuel pool capacity from 735 fuel assemblies to a new capacity of 1624 fuel assemblies. As part of this project, spent fuel racks were allowed to be temporarily installed in the cask pit and transfer pit.

License Amendment Number 237 was issued on February 29, 2000, providing approval for use of up to 289 cask pit rack storage locations. License Amendment Number 247 was issued October 19, 2001, providing approval for the increase in spent fuel pool storage capacity and for use of up to 90 transfer pit rack storage locations. Currently, there are no storage racks in the cask pit or transfer pit. All of the storage racks are currently located in the spent fuel pool.

Fuel Storage and Handling Systems

Spent fuel storage is described in USAR Section 9.1.2, "Spent Fuel Storage." The spent fuel storage pool, cask pit, and transfer pit are located within the fuel handling and storage area of the auxiliary building. The spent fuel pool is a reinforced-concrete pool lined with stainless steel. The pool is currently sized to store 1624 irradiated fuel assemblies.

The cask pit is independent of, and separated from, the spent fuel pool by a 3-foot-thick concrete wall. The cask pit provides for the transfer of the spent fuel assemblies from storage to a shipping cask or dry fuel storage canister. The only communication between the spent fuel pool and the cask pit is through a 36-inch-wide slot opening. This opening is provided with a watertight bulkhead that can isolate the spent fuel pool when needed.

The transfer pit provides for the transfer of fuel assemblies between the refueling canal in the containment vessel and the SFP, via the fuel transfer tubes. A watertight bulkhead identical to that for the cask pit is provided to isolate the transfer pit from the SFP.

There are two cranes that handle loads over spent fuel in the fuel storage area: the Fuel Storage Handling Bridge (FSHB) and the spent fuel cask crane. The spent fuel assemblies are placed into, and removed from, the racks by the FSHB. The FSHB is provided with an overload interlock on the hoist which shuts off the power to the hoist any time the load on the hoist exceeds 2700 pounds. The design of the spent fuel cask crane prevents crane travel over fuel assemblies in the spent fuel pool unless a key operated by-pass switch is actuated.

Fuel Handling Area Ventilation System

The fuel handling area ventilation system is described in USAR Section 9.4.2.2, "Fuel-Handling Area." The system is designed to provide an average of 20 air changes per hour over the surface of the spent fuel pool, and to maintain the fuel handling area at between 60 and 110 °F. The ventilation flow for the fuel handling and storage area housing the spent fuel pool and cask pit is

normally exhausted to the environment through the station vent stack. Exhaust air from the fuel-handling area is monitored by radiation detectors before it is discharged from the station through the vent stack. In the event of a fuel handling accident, the emergency ventilation system (EVS) is automatically started and charcoal filters are utilized to filter exhaust air from the fuel handling area, via interconnections.

Reason for Change

The proposed changes are desired to support removal of restrictions on movement of crane loads over the transfer and cask pits. These restrictions are no longer required since there are no fuel racks in the transfer and cask pits. The proposed changes also simplify the Technical Specifications by removing allowances and requirements that are no longer needed. These changes are desired to enhance operations during the fourteenth refueling outage, which is currently scheduled to commence in March 2006.

4.0 TECHNICAL ANALYSIS

Relocation of TS 3/4.9.7, "Crane Travel - Fuel Handling Building"

TS 3/4.9.7 prohibits the movement of loads in excess 2430 pounds over fuel assemblies in the spent fuel pool, cask pit, or transfer pit. The restriction on movement of loads in excess of the nominal weight of a fuel assembly in a failed fuel container over other fuel assemblies in the fuel storage area ensures that in the event a load is dropped (1) the activity release will not exceed the source term assumed in the design basis fuel handling accident for outside containment, and (2) any possible distortion of fuel in the storage racks will not result in a critical array. 10 CFR 50.36(c)(2)(ii) specifies criteria for determining which items require a TS Limiting Condition for Operation (LCO). An evaluation of TS 3/4.9.7 requirements with respect to the four criteria of 10 CFR 50.36(c)(2)(ii) follows:

Criterion 1: Installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary.

Limitations on transport of loads in the fuel storage area are not installed instrumentation used to detect degradation of the reactor coolant pressure boundary. Therefore, the TS 3/4.9.7 requirements do not meet Criterion 1 for inclusion in the TSs.

Criterion 2: A process variable, design feature, or operating restriction that is an initial condition of a design basis accident or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.

The DBNPS USAR analysis of the fuel handling accident outside of containment assumes the failure of 56 fuel pins. The cause of the pin failures is identified as mechanical damage. The USAR analysis does not describe the actual manner in which the fuel is damaged. The limitation on transport of loads is not considered an initial condition of a design basis accident or transient since no relationship is described between load size and fuel pins damaged. Therefore, the TS 3/4.9.7 requirements do not meet Criterion 2 for inclusion in the TSs.

Criterion 3: 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.

Limitations on transport of loads in the fuel storage area are not a structure, system, or component that mitigates any design basis accident or transient. Therefore, the TS 3/4.9.7 requirements do not meet Criterion 3 for inclusion in the TSs.

Criterion 4: A structure, system, or component which operating experience or probabilistic risk assessment has shown to be significant to public health and safety.

Limitations on transport of loads in the fuel storage area are not a structure, system, or component which operating experience or probabilistic risk assessment has shown to be significant to public health and safety. Therefore, the TS 3/4.9.7 requirements do not meet Criterion 4 for inclusion in the TSs.

The requirements of TS 3/4.9.7 will be relocated to the TRM upon implementation of the amendment. The TRM is incorporated by reference into the DBNPS USAR. Any subsequent changes to the TRM would require evaluation under the appropriate regulatory processes (e.g., 10 CFR 50.59). This proposed change is consistent with the criteria of 10 CFR 50.36 for establishing an LCO. NUREG-1430, *Standard Technical Specifications - Babcock and Wilcox Plants*, Revision 3, does not contain a LCO for crane travel in the fuel storage area. Given that crane travel requirements will continue to be in effect under the proposed change, the proposed change would have no adverse effect on nuclear safety.

Revisions to TS 3/4.9.11, TS 3/4.9.12, TS 3/4.9.13, and TS 5.6

The proposed changes to TS 3/4.9.11, TS 3/4.9.12, TS 3/4.9.13, and TS 5.6 reflect that there are currently no storage racks in the cask pit or transfer pit. The storage racks that were temporarily installed in the cask pit during the rerack project have been moved into the spent fuel pool. No storage rack was ever actually installed in the transfer pit during the rerack project. There is no foreseeable future need for fuel storage racks in either the cask or transfer pit. Therefore, it is appropriate to remove requirements related to storage of fuel in the cask and transfer pits.

In addition to revisions to remove fuel storage requirements for the cask and transfer pits, TS 3.9.13 and TS 5.6 would also be revised to reflect that there are no longer low-density fuel storage racks in the spent fuel pool. The rerack project replaced all low-density fuel storage racks with high-density fuel storage racks. There is no foreseeable future need for reinstalling low-density fuel storage racks. Therefore, it is appropriate to remove requirements related to storage of fuel in low-density storage racks.

The proposed changes to TSs are consistent with the removal of temporarily installed storage racks and with the removal of low density fuel storage racks from the spent fuel pool. The proposed changes will have no adverse effect on nuclear safety.

5.0 REGULATORY SAFETY ANALYSIS

5.1 No Significant Hazards Consideration

The proposed amendment would revise the Technical Specifications related to fuel handling and storage. Specifically, the proposed change would revise Technical Specification (TS) 3/4.9.11, "Storage Pool Water Level," TS 3/4.9.12, "Storage Pool Ventilation," TS 3/4.9.13, "Spent Fuel Assembly Storage," and TS 5.6, "Fuel Storage," to reflect that spent fuel storage racks are no longer installed in the cask pit or transfer pit. Additionally, the proposed changes would relocate the requirements of TS 3/4.9.7, "Crane Travel - Fuel Handling Building," to the DBNPS Technical Requirements Manual (TRM). Fuel storage racks were permitted to be temporarily installed in the cask pit and transfer pit during a project to increase spent fuel pool storage capacity. All temporarily installed fuel storage racks have now been moved into the spent fuel pool. The proposed changes to TS 3/4.9.13 and TS 5.6 would also reflect that there are no longer low-density fuel storage racks in the spent fuel pool. The proposed changes will make TS requirements consistent with the current fuel storage design.

An evaluation has been performed to determine whether or not 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. Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

   Response: No.

   The proposed amendment would relocate the requirements of TS 3/4.9.7 to the DBNPS TRM. Any subsequent changes to the TRM would require evaluation under the appropriate regulatory processes (e.g., 10 CFR 50.59). The proposed relocation of TS 3/4.9.7 does not affect any accident initiators. The relocated TRM requirements will assure the initial conditions assumed in the analysis of a fuel handling accident are maintained. The proposed change does not affect the ability of plant equipment to mitigate the consequences of any accident. The proposed changes to reflect that fuel storage racks are no longer installed in the cask pit or transfer pit and that low density fuel storage racks are no longer installed in the spent fuel pool are consistent with the current plant configuration. The proposed changes do not affect any accident initiators. The revised requirements will continue to assure the capability to mitigate the consequences of a fuel handling accident in the fuel storage area. Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

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

   Response: No.

   The proposed relocation of TS 3/4.9.7 to the TRM does not alter the design, operation, or testing of any structure, system, or component. The proposed changes to reflect that fuel storage racks are no longer installed in the cask pit or transfer pit and that low density fuel storage racks are no longer installed in the spent fuel pool are consistent with the current plant configuration. No new accident initiators are created. Therefore, the proposed change does not create the possibility of a new or different kind of accident from any previously evaluated.

3. Does the proposed change involve a significant reduction in a margin of safety?

   Response: No.

   The proposed relocation of TS 3/4.9.7 to the TRM does not alter the design, operation, or testing of any structure, system, or component. The proposed changes to reflect that fuel storage racks are no longer installed in the cask pit or transfer pit and that low density fuel storage racks are no longer installed in the spent fuel pool are consistent with the current plant configuration and do not adversely affect the ability of any structure, system, or component to perform its safety function. Therefore, the proposed change does not involve a significant reduction in a margin of safety.

Based on the above, it is concluded that the proposed amendment presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is acceptable.

5.2 Applicable Regulatory Requirements/Criteria

10 CFR 50.36 contains requirements for content of operating license Technical Specifications. The requirements of Technical Specification (TS) 3/4.9.7, which are proposed for relocation to the Technical Requirements Manual, were compared against the criteria of 10 CFR 50.36(c)(2)(ii) for inclusion in TSs. This comparison is documented in Section 4.0 of this application. The relocation of TS 3/4.9.7 is consistent with NUREG-1430, *Standard Technical Specifications - Babcock and Wilcox Plants*, Revision 3. Therefore, relocation of the requirements of TS 3/4.9.7 does not affect the conformance of the DBNPS Operating License Technical Specifications to the requirements of 10 CFR 50.36.

Design requirements for the DBNPS fuel handling and storage systems are specified in USAR Section 3D.1.52, "Criterion 61 - Fuel Storage and Handling and Radioactivity Control," and Section 3D.1.53, "Criterion 62 - Prevention of Criticality in Fuel Storage and Handling." USAR Section 3D.1.52 states, in part:

> The fuel storage and handling, radioactive waste, and other systems which may contain radioactivity are designed to assure adequate safety under normal and postulated accident conditions. These systems are designed (1) with a capability to permit appropriate periodic inspection and testing of components important to safety, (2) with suitable shielding for radiation protection, (3) with appropriate containment, confinement, and filtering systems, (4) with a residual heat removal capability having reliability and testability that reflects the importance to safety of decay heat and other residual heat removal, and (5) to prevent significant reduction in fuel storage coolant inventory under accident conditions.

USAR Section 3D.1.53 states, in part:

> Criticality in the fuel storage and handling system is prevented by physical systems or processes by using geometrically safe configurations.

The proposed changes to the Technical Specifications do not adversely affect the ability of any fuel handling or storage system to meet its design requirements. The proposed changes ensure that the initial conditions assumed in accident analyses remain bounding and that structures, systems, and components relied on to mitigate accident consequences remain capable of performing their functions. The revised requirements are consistent with the current design and operation of the facility.

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.

6.0 ENVIRONMENTAL CONSIDERATION

A review has determined that the proposed amendment 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, or would change an inspection or surveillance requirement. However, the proposed amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure.

Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

7.0 REFERENCES

1. DBNPS Operating License NPF-3, Appendix A Technical Specifications through Amendment 262.

2. DBNPS Updated Safety Analysis Report through Revision 24.

3. DBNPS Technical Requirements Manual through Revision 20.

4. NUREG-1430, *Standard Technical Specifications - Babcock and Wilcox Plants*, Revision 3.

8.0 ATTACHMENTS

1. Proposed Mark-Up of Technical Specification Pages

2. Proposed Retyped Technical Specification Pages

3. Technical Specification Bases Pages

LAR 02-0003
Attachment 1

PROPOSED MARK-UP
OF
TECHNICAL SPECIFICATION PAGES

(11 pages follow)

INDEX

LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

~~REFUELING OPERATIONS~~

DELETED ~~CRANE TRAVEL - FUEL HANDLING BUILDING~~

~~LIMITING CONDITION FOR OPERATION~~

~~3.9.7 Loads in excess of 2430 pounds shall be prohibited from travel over fuel assemblies in the spent fuel pool, cask pit*, or transfer pit.~~

~~APPLICABILITY: With fuel assemblies and water in the spent fuel pool, cask pit, or transfer pit.~~

~~ACTION:~~

~~With the requirements of the above specification not satisfied, place the crane load in a safe condition. The provisions of Specification 3.0.3 are not applicable.~~

~~SURVEILLANCE REQUIREMENTS~~

~~4.9.7 The weight of each load, other than a fuel assembly, shall be verified to be $\leq$ 2430 pounds prior to moving it over fuel assemblies in the spent fuel pool, cask pit*, or transfer pit.~~

~~* An impact cover weighing in excess of 2430 pounds may be moved over fuel assemblies in the cask pit provided that administrative controls are established. Other loads in excess of 2430 pounds may be moved over fuel assemblies in the cask pit provided: 1) an impact cover is installed, and 2) administrative controls are established to limit the load to 17,530 pounds and to limit the height that the load may travel over the impact cover.~~

REFUELING OPERATIONS

STORAGE POOL WATER LEVEL

LIMITING CONDITION FOR OPERATION

3.9.11 As a minimum, 23 feet of water shall be maintained over the top of irradiated fuel assemblies seated in the storage racks in the spent fuel pool~~, cask pit, or transfer pit~~.

APPLICABILITY: Whenever irradiated fuel assemblies are in the spent fuel pool~~, cask pit, or transfer pit~~.

ACTION:

With the requirement of the specification not satisfied, suspend all movement of fuel and crane operations with loads in the fuel storage area and restore the water level to within its limit within 4 hours. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.11 The water level in the spent fuel pool~~, cask pit, and transfer pit~~ shall be determined to be at least its minimum required depth at least once per 7 days when irradiated fuel assemblies are in ~~these locations~~ the spent fuel pool.

REFUELING OPERATIONS

STORAGE POOL VENTILATION

LIMITING CONDITION FOR OPERATION

3.9.12 Two independent emergency ventilation systems servicing the storage pool area shall be OPERABLE. When an emergency ventilation system servicing the storage pool is incapable of meeting the acceptance criteria of Surveillance Requirement 4.9.12.1 solely because the containment equipment hatch is open and both doors of the containment personnel air lock are open, it may be considered OPERABLE provided that at least one personnel air lock door is capable of being closed and a designated individual is available immediately outside the personnel air lock to close the door.

APPLICABILITY: Whenever irradiated fuel is in the spent fuel pool~~, cask pit, or transfer pit,~~ or during CORE ALTERATIONS or movement of irradiated fuel within the containment with the containment equipment hatch open.

ACTION:

a. With one emergency ventilation system servicing the storage pool area inoperable, fuel movement within the spent fuel pool~~, cask pit, or transfer pit,~~ or crane operation with loads over the spent fuel pool~~, cask pit, or transfer pit,~~ may proceed provided the OPERABLE emergency ventilation system servicing the storage pool area is in operation and discharging through at least one train of HEPA filters and charcoal adsorbers.

b. With one emergency ventilation system servicing the storage pool area inoperable, CORE ALTERATIONS and fuel movement within containment may proceed provided either the OPERABLE emergency ventilation system servicing the storage pool area is in operation and discharging through at least one train of HEPA filters and charcoal adsorbers or the containment equipment hatch cover is closed and held in place by a minimum of four bolts.

c. With no emergency ventilation system servicing the storage pool area OPERABLE, suspend CORE ALTERATIONS and all operations involving movement of fuel within the containment~~,~~ or spent fuel pool~~, cask pit, or transfer pit,~~ or crane operation with loads over the spent fuel pool~~, cask pit, or transfer pit,~~ until at least one system is restored to OPERABLE status. CORE ALTERATONS and fuel movement within containment may proceed provided the containment equipment hatch cover is closed and held in place by a minimum of four bolts.

d. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.12.1 The above required emergency ventilation system servicing the storage pool area shall be demonstrated OPERABLE per the applicable Surveillance Requirements of 4.6.5.1, and at least once each REFUELING INTERVAL by verifying that the emergency ventilation system servicing the storage pool area maintains the storage pool area at a negative pressure of $\geq$ 1/8 inches Water Gauge relative to the outside atmosphere during system operation.

4.9.12.2 The normal storage pool ventilation system shall be demonstrated OPERABLE at least once each REFUELING INTERVAL by verifying that the system fans stop automatically and that dampers automatically divert flow into the emergency ventilation system on a fuel storage area high radiation test signal.

REFUELING OPERATIONS

SPENT FUEL ASSEMBLY STORAGE

LIMITING CONDITION FOR OPERATION

3.9.13 ~~Fuel assemblies shall be placed in the spent fuel storage racks in accordance with the following criteria:~~

~~a.~~ Fuel assemblies stored in the spent fuel pool shall be placed in the spent fuel storage racks ~~meet the criteria shown~~ in accordance with the criteria shown in Figure 3.9-1~~, when located in the low density spent fuel storage racks~~.

~~b. Fuel assemblies stored in the cask pit shall meet the criteria shown in Figure 3.9-2, when located in the high density spent fuel storage racks.~~

~~c. Fuel assemblies stored in the spent fuel pool or transfer pit shall meet the criteria shown in Figure 3.9-3, when located in the high density spent fuel storage racks.~~

APPLICABILITY: Whenever fuel assemblies are in the spent fuel pool~~, cask pit, or transfer pit~~.

ACTION:

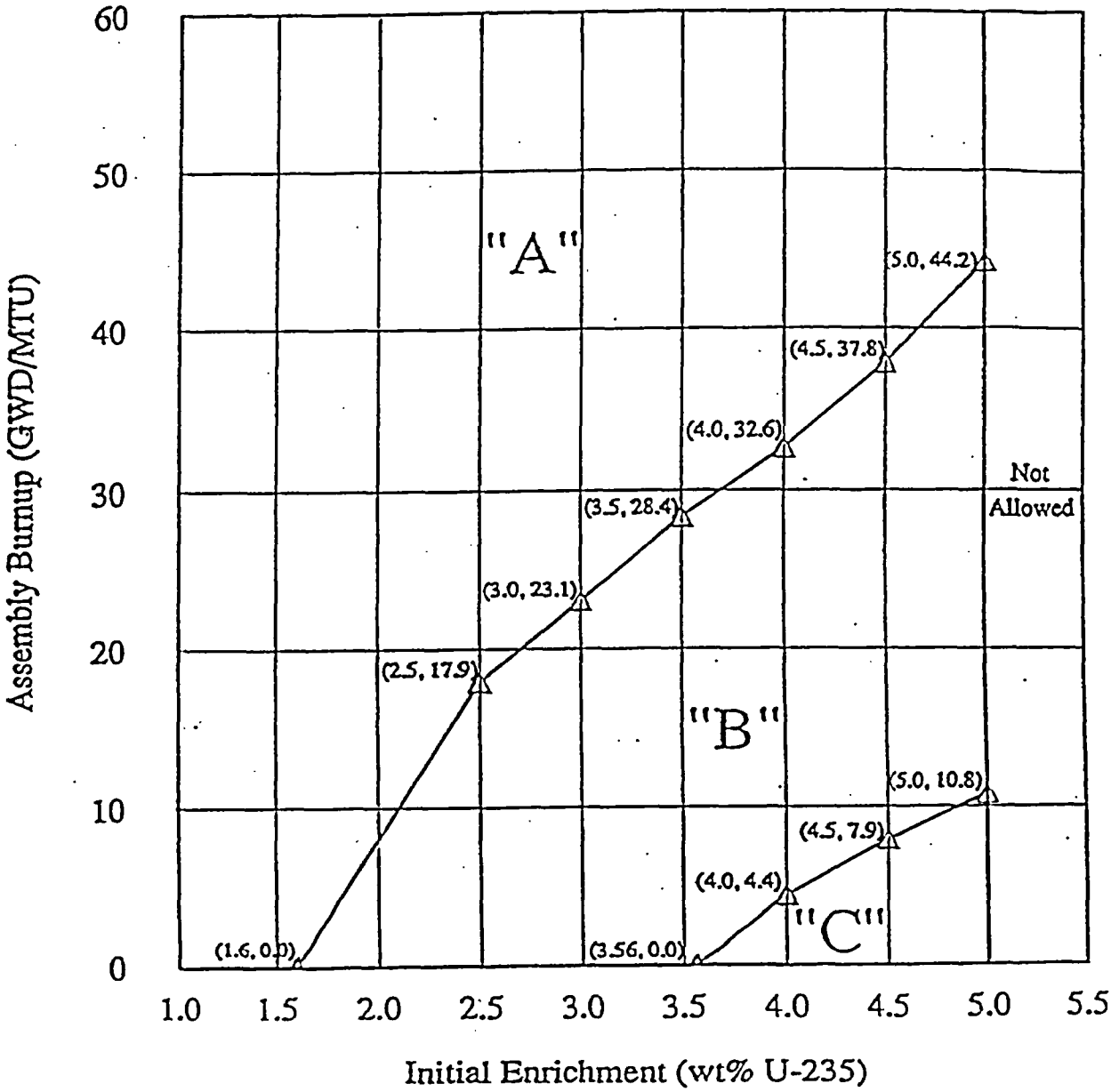
With the requirements of the above specification not satisfied, suspend all other fuel movement within the spent fuel pool~~, cask pit, or transfer pit~~ and move the non-complying fuel assemblies to allowable locations in accordance with Figure 3.9-1~~, Figure 3.9-2, or Figure 3.9-3, as appropriate~~. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.13.1 Prior to storing a fuel assembly in the spent fuel pool~~, cask pit, or transfer pit~~, verify by administrative means that the initial enrichment and burnup of the fuel assembly are in accordance with Figure 3.9-1~~, Figure 3.9-2, or Figure 3.9-3, as appropriate~~.

Delete

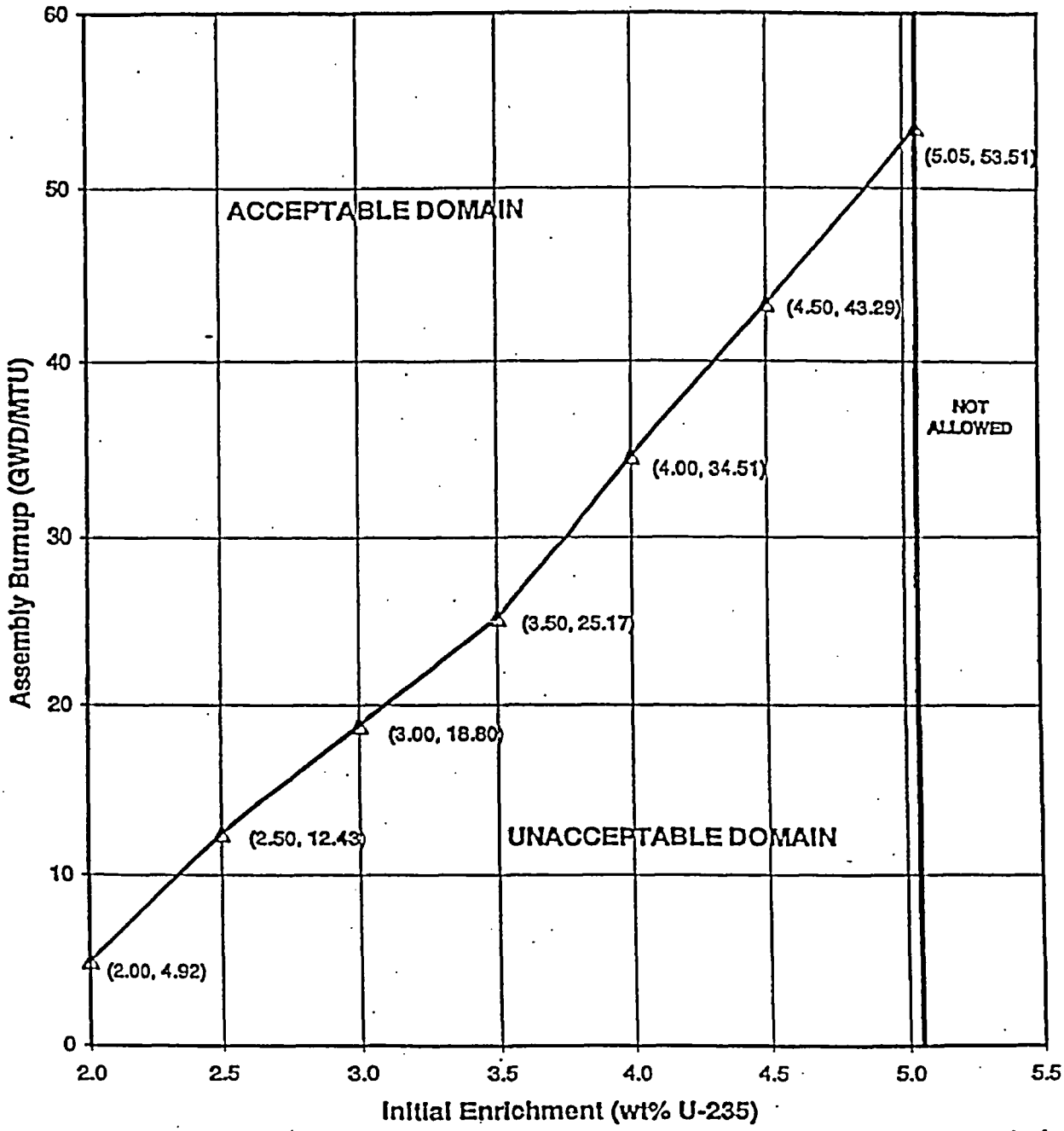
Figure 3.9-1
Burnup vs. Enrichment Curves
For the Davis-Besse Low Density
Spent Fuel Pool Storage Racks



Category "A": May be placed in any rack location
Category "B": Must not be placed directly adjacent to Category "C" assemblies
Category "C": May only be placed directly adjacent to Category "A" assemblies or non-fuel locations

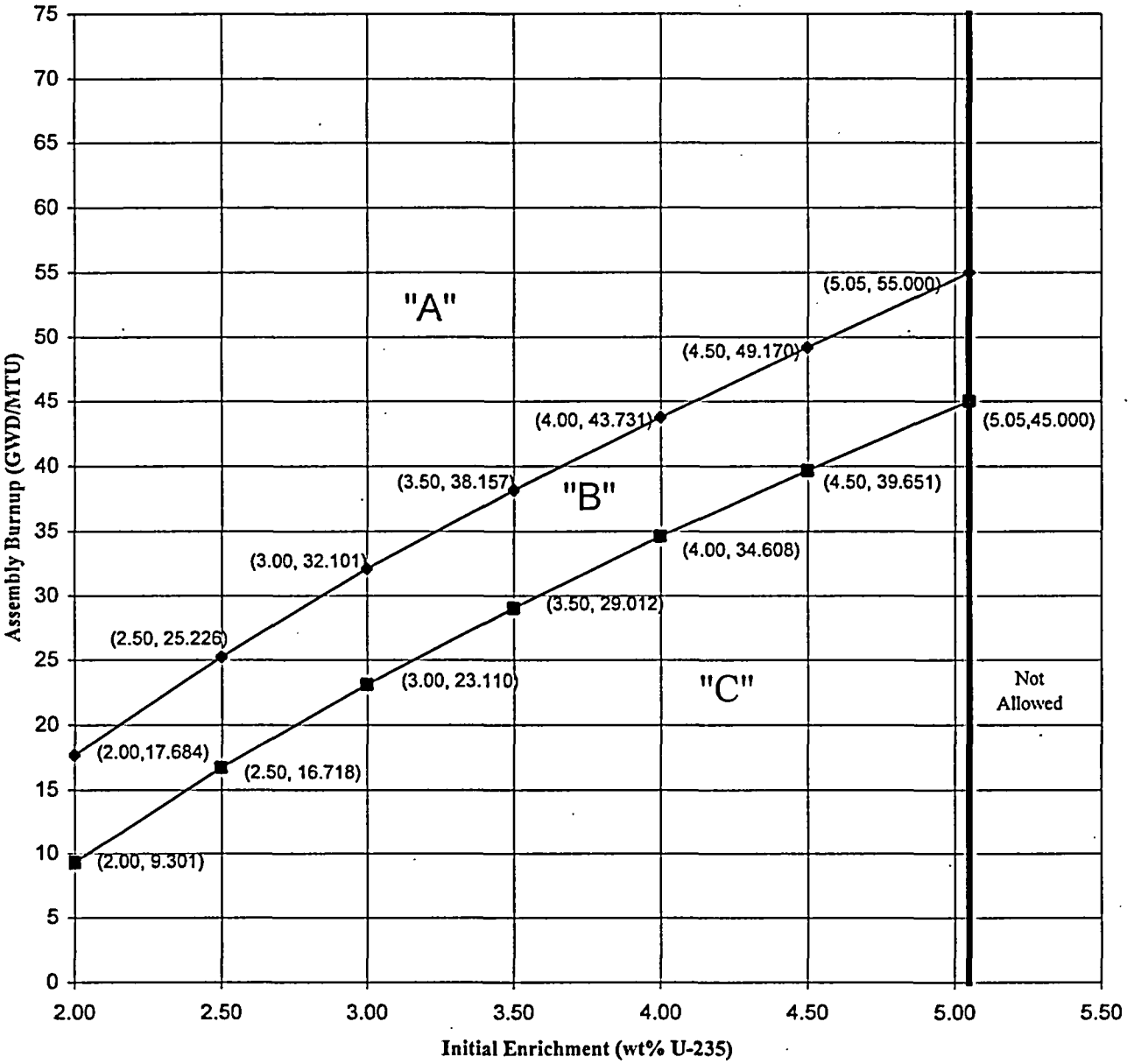
Delete

Figure 3.9-2
Burnup vs. Enrichment Curve
For the Davis-Besse High Density
Cask Pit Storage Racks



Note: Fuel assemblies with initial enrichments less than 2.0 wt% ^{235}U will conservatively be required to meet the burnup requirements of 2.0 wt% ^{235}U assemblies).

Figure 3.9-~~3~~1
Burnup vs Enrichment Curves
For the Davis-Besse High Density
Spent Fuel Pool ~~and Transfer Pit~~ Storage Racks



Notes: Fuel assemblies with initial enrichments less than 2 wt% U-235 will conservatively be required to meet the burnup requirements of 2.0 wt% U-235 assemblies.
Loading pattern considerations applicable to Category "A", "B", and "C" assemblies are described in the Bases

5.0 DESIGN FEATURES

5.1 Site Location

The Davis-Besse Nuclear Power Station, Unit Number 1, site is located on Lake Erie in Ottawa County, Ohio, approximately six miles northeast from Oak Harbor, Ohio and 21 miles east from Toledo, Ohio. The exclusion area boundary has a minimum radius of 2400 feet from the center of the plant.

5.2 (Deleted)

5.3 Reactor Core

5.3.1 Fuel Assemblies

The reactor core shall contain 177 fuel assemblies. Each assembly shall consist of a matrix of zircaloy M5, or ZIRLO clad fuel rods with an initial composition of natural or slightly enriched uranium dioxide (UO_2) as fuel material. Limited substitutions of zirconium alloy or stainless steel filler rods for fuel rods, in accordance with approved applications of fuel rod configurations, may be used. Fuel assemblies shall be limited to those fuel designs that have been analyzed with applicable NRC staff approved codes and methods and shown by tests or analyses to comply with all fuel safety design bases. A limited number of lead test assemblies that have not completed representative testing may be placed in non-limiting core regions.

5.3.2 Control Rods

The reactor core shall contain 53 safety and regulating control rod assemblies and 8 axial power shaping rod (APSR) assemblies. The nominal values of absorber material for the safety and regulating control rods shall be 80 percent silver, 15 percent indium and 5 percent cadmium. The absorber material for the APSRs shall be 100 percent Inconel.

5.4 (Deleted)

5.5 (Deleted)

5.6 Fuel Storage

5.6.1 Criticality

~~5.6.1.1 The low-density spent fuel pool storage racks are designed and shall be maintained with:~~

~~a. A K_{eff} equivalent to less than or equal to 0.95 when flooded with unborated water, which includes a conservative allowance of 1% delta k/k for calculation uncertainty.~~

~~(continued)~~

5.0 DESIGN FEATURES

5.6 Fuel Storage (continued)

~~b. A rectangular array of stainless steel cells spaced 12 31/32 inches on centers in one direction and 13 3/16 inches on centers in the other direction. Fuel assemblies stored in the spent fuel pool shall be placed in a stainless steel cell of 0.125 inches nominal thickness or in a failed fuel container.~~

~~c. Fuel assemblies stored in the spent fuel pool in accordance with Technical Specification 3.9.13.~~

5.6.1.~~2~~ 1 The new fuel storage racks are designed and shall be maintained with:

a. A K_{eff} equivalent to less than or equal to 0.95 when flooded with unborated water, which includes a conservative allowance of 1% delta k/k for uncertainties as described in Section 9.1 of the USAR.

b. A K_{eff} equivalent to less than or equal to 0.98 when immersed in a hydrogenous "mist" of such a density that provides optimum moderation (i.e., highest value of K_{eff}), which includes a conservative allowance of 1% delta k/k for uncertainties as described in Section 9.1 of the USAR.

c. A nominal 21 inch center-to-center distance between fuel assemblies placed in the storage racks.

d. Fuel assemblies having a maximum initial enrichment of 5.0 weight percent uranium-235.

5.6.1.~~3~~ 2 The high density spent fuel pool storage racks~~, cask pit storage racks, and transfer pit rack~~ are designed and shall be maintained with:

a. A K_{eff} equivalent to less than or equal to 0.95 when flooded with unborated water, which includes a conservative allowance for manufacturing tolerances and calculation uncertainty.

b. A rectangular array of stainless steel cells with walls of 0.075 inches nominal thickness, spaced a nominal 9.22 inches on center in both directions. Boral neutron absorber material is utilized between each cell for criticality considerations.

c. Fuel assemblies stored in the spent fuel pool~~, cask pit, or transfer pit~~ in accordance with Technical Specification 3.9.13.

DESIGN FEATURES

5.6 Fuel Storage (continued)

5.6.2 Drainage

The spent fuel storage pool, cask pit, and transfer pit are designed and shall be maintained to prevent inadvertent draining below 9 feet above the top of the fuel storage racks.

5.6.3 Capacity

~~a.~~ The spent fuel storage pool is designed and shall be maintained with a storage capacity limited to no more than 1624 fuel assemblies~~, less the number of fuel assemblies stored in racks located in the cask pit and transfer pit~~.

~~b. The cask pit is designed and shall be maintained with a storage capacity limited to no more than 289 fuel assemblies.~~

~~c. The transfer pit is designed and shall be maintained with a storage capacity limited to no more than 90 fuel assemblies.~~

5.7 (Deleted)

LAR 02-0003
Attachment 2

PROPOSED RETYPED
TECHNICAL SPECIFICATION PAGES

(9 pages follow)

INDEX

LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

DELETED

REFUELING OPERATIONS

STORAGE POOL WATER LEVEL

LIMITING CONDITION FOR OPERATION

3.9.11 As a minimum, 23 feet of water shall be maintained over the top of irradiated fuel assemblies seated in the storage racks in the spent fuel pool.

APPLICABILITY: Whenever irradiated fuel assemblies are in the spent fuel pool.

ACTION:

With the requirement of the specification not satisfied, suspend all movement of fuel and crane operations with loads in the fuel storage area and restore the water level to within its limit within 4 hours. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.11 The water level in the spent fuel pool shall be determined to be at least its minimum required depth at least once per 7 days when irradiated fuel assemblies are in the spent fuel pool.

REFUELING OPERATIONS

STORAGE POOL VENTILATION

LIMITING CONDITION FOR OPERATION

3.9.12 Two independent emergency ventilation systems servicing the storage pool area shall be OPERABLE. When an emergency ventilation system servicing the storage pool is incapable of meeting the acceptance criteria of Surveillance Requirement 4.9.12.1 solely because the containment equipment hatch is open and both doors of the containment personnel air lock are open, it may be considered OPERABLE provided that at least one personnel air lock door is capable of being closed and a designated individual is available immediately outside the personnel air lock to close the door.

APPLICABILITY: Whenever irradiated fuel is in the spent fuel pool or during CORE ALTERATIONS or movement of irradiated fuel within the containment with the containment equipment hatch open.

ACTION:

a. With one emergency ventilation system servicing the storage pool area inoperable, fuel movement within the spent fuel pool or crane operation with loads over the spent fuel pool may proceed provided the OPERABLE emergency ventilation system servicing the storage pool area is in operation and discharging through at least one train of HEPA filters and charcoal adsorbers.

b. With one emergency ventilation system servicing the storage pool area inoperable, CORE ALTERATIONS and fuel movement within containment may proceed provided either the OPERABLE emergency ventilation system servicing the storage pool area is in operation and discharging through at least one train of HEPA filters and charcoal adsorbers or the containment equipment hatch cover is closed and held in place by a minimum of four bolts.

c. With no emergency ventilation system servicing the storage pool area OPERABLE, suspend CORE ALTERATIONS and all operations involving movement of fuel within the containment or spent fuel pool, or crane operation with loads over the spent fuel pool, until at least one system is restored to OPERABLE status. CORE ALTERATONS and fuel movement within containment may proceed provided the containment equipment hatch cover is closed and held in place by a minimum of four bolts.

d. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.12.1 The above required emergency ventilation system servicing the storage pool area shall be demonstrated OPERABLE per the applicable Surveillance Requirements of 4.6.5.1, and at least once each REFUELING INTERVAL by verifying that the emergency ventilation system servicing the storage pool area maintains the storage pool area at a negative pressure of $\geq$ 1/8 inches Water Gauge relative to the outside atmosphere during system operation.

4.9.12.2 The normal storage pool ventilation system shall be demonstrated OPERABLE at least once each REFUELING INTERVAL by verifying that the system fans stop automatically and that dampers automatically divert flow into the emergency ventilation system on a fuel storage area high radiation test signal.

REFUELING OPERATIONS

SPENT FUEL ASSEMBLY STORAGE

LIMITING CONDITION FOR OPERATION

3.9.13 Fuel assemblies stored in the spent fuel pool shall be placed in the spent fuel storage racks in accordance with the criteria shown in Figure 3.9-1.

APPLICABILITY: Whenever fuel assemblies are in the spent fuel pool.

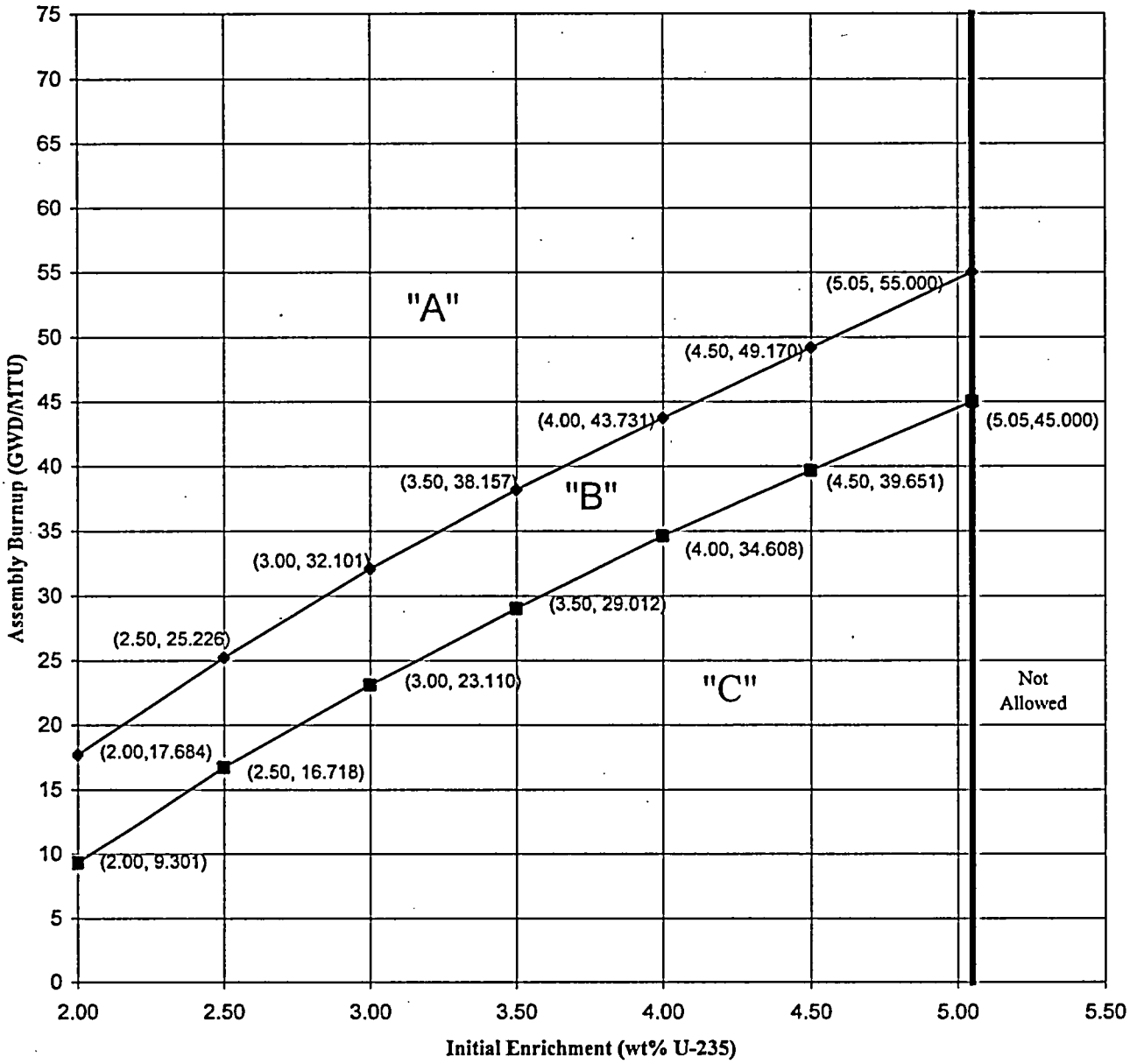
ACTION:

With the requirements of the above specification not satisfied, suspend all other fuel movement within the spent fuel pool and move the non-complying fuel assemblies to allowable locations in accordance with Figure 3.9-1. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.13.1 Prior to storing a fuel assembly in the spent fuel pool, verify by administrative means that the initial enrichment and burnup of the fuel assembly are in accordance with Figure 3.9-1.

Figure 3.9-1
Burnup vs Enrichment Curves
For the Davis-Besse High Density
Spent Fuel Pool Storage Racks



Notes: Fuel assemblies with initial enrichments less than 2 wt% U-235 will conservatively be required to meet the burnup requirements of 2.0 wt% U-235 assemblies.
Loading pattern considerations applicable to Category "A", "B", and "C" assemblies are described in the Bases

5.0 DESIGN FEATURES

5.1 Site Location

The Davis-Besse Nuclear Power Station, Unit Number 1, site is located on Lake Erie in Ottawa County, Ohio, approximately six miles northeast from Oak Harbor, Ohio and 21 miles east from Toledo, Ohio. The exclusion area boundary has a minimum radius of 2400 feet from the center of the plant.

5.2 (Deleted)

5.3 Reactor Core

5.3.1 Fuel Assemblies

The reactor core shall contain 177 fuel assemblies. Each assembly shall consist of a matrix of zircaloy M5, or ZIRLO clad fuel rods with an initial composition of natural or slightly enriched uranium dioxide (UO_2) as fuel material. Limited substitutions of zirconium alloy or stainless steel filler rods for fuel rods, in accordance with approved applications of fuel rod configurations, may be used. Fuel assemblies shall be limited to those fuel designs that have been analyzed with applicable NRC staff approved codes and methods and shown by tests or analyses to comply with all fuel safety design bases. A limited number of lead test assemblies that have not completed representative testing may be placed in non-limiting core regions.

5.3.2 Control Rods

The reactor core shall contain 53 safety and regulating control rod assemblies and 8 axial power shaping rod (APSR) assemblies. The nominal values of absorber material for the safety and regulating control rods shall be 80 percent silver, 15 percent indium and 5 percent cadmium. The absorber material for the APSRs shall be 100 percent Inconel.

5.4 (Deleted)

5.5 (Deleted)

5.6 Fuel Storage

5.6.1 Criticality

5.6.1.1 The new fuel storage racks are designed and shall be maintained with:

a. A K_{eff} equivalent to less than or equal to 0.95 when flooded with unborated water, which includes a conservative allowance of 1% delta k/k for uncertainties as described in Section 9.1 of the USAR.

5.0 DESIGN FEATURES

5.6 Fuel Storage (continued)

b. A K_{eff} equivalent to less than or equal to 0.98 when immersed in a hydrogenous "mist" of such a density that provides optimum moderation (i.e., highest value of K_{eff}), which includes a conservative allowance of 1% delta k/k for uncertainties as described in Section 9.1 of the USAR.

c. A nominal 21 inch center-to-center distance between fuel assemblies placed in the storage racks.

d. Fuel assemblies having a maximum initial enrichment of 5.0 weight percent uranium-235.

5.6.1.2 The high density spent fuel pool storage racks are designed and shall be maintained with:

a. A K_{eff} equivalent to less than or equal to 0.95 when flooded with unborated water, which includes a conservative allowance for manufacturing tolerances and calculation uncertainty.

b. A rectangular array of stainless steel cells with walls of 0.075 inches nominal thickness, spaced a nominal 9.22 inches on center in both directions. Boral neutron absorber material is utilized between each cell for criticality considerations.

c. Fuel assemblies stored in the spent fuel pool in accordance with Technical Specification 3.9.13.

DESIGN FEATURES

5.6 Fuel Storage (continued)

5.6.2 Drainage

The spent fuel storage pool, cask pit, and transfer pit are designed and shall be maintained to prevent inadvertent draining below 9 feet above the top of the fuel storage racks.

5.6.3 Capacity

The spent fuel storage pool is designed and shall be maintained with a storage capacity limited to no more than 1624 fuel assemblies.

5.7 (Deleted)

LAR 02-0003
Attachment 3

TECHNICAL SPECIFICATION BASES PAGES

(2 pages follow)

Note: The Bases pages are provided for information only.

3/4.9.6 FUEL HANDLING BRIDGE OPERABILITY

The OPERABILITY requirements of the hoist bridges used for movement of fuel assemblies ensures that: 1) fuel handling bridges will be used for movement of control rods and fuel assemblies, 2) each hoist has sufficient load capacity to lift a fuel element, and 3) the core internals and pressure vessel are protected from excessive lifting force in the event they are inadvertently engaged during lifting operations.

3/4.9.7 CRANE TRAVEL - FUEL HANDLING BUILDING

DeletedThe restriction on movement of loads in excess of the nominal weight of a fuel assembly in a failed fuel container over other fuel assemblies in the spent fuel pool, cask pit, or transfer pit ensures that in the event this load is dropped (1) the activity release will not exceed the source term assumed in the design basis fuel handling accident for outside containment, and (2) any possible distortion of fuel in the storage racks will not result in a critical array.

During spent fuel pool re-racking activities, if it is necessary to move a storage rack over fuel assemblies stored in the cask pit, the 2430 pound weight limitation may be exceeded in order to install or remove an impact cover over the cask pit. The physical design of the impact cover, together with administrative controls established while the cover is being moved, ensure that it can not fall into the cask pit in the unlikely event that it is dropped. Once installed over the cask pit, the impact cover is capable of withstanding a dropped load of up to 17,530 pounds (the heaviest rack, including rigging). The height that such loads may travel over the cover is established by calculation based on the design of the cover. Administrative controls ensure that maximum height and weight restrictions are not exceeded.

3/4.9.8 COOLANT CIRCULATION

The requirement that at least one decay heat removal loop be in operation ensures that (1) sufficient cooling capacity is available to remove decay heat and maintain the water in the reactor pressure vessel below 140°F as required during the REFUELING MODE, and (2) sufficient coolant circulation is maintained through the reactor core to minimize the effect of a boron dilution incident and prevent boron stratification.

The requirement to have two DHR loops OPERABLE when there is less than 23 feet of water above the core ensures that a single failure of the operating DHR loop will not result in a complete loss of decay heat removal capability. With the reactor vessel head removed and 23 feet of water above the core, a large heat sink is available for core cooling. Thus, in the event of a failure of the operating DHR loop, adequate time is provided to initiate emergency procedures to cool the core.

In MODE 6, the RCS boron concentration is typically somewhat higher than the boron concentration required by Specification 3.9.1, and could be higher than the boron concentration of normal sources of water addition. The flowrate through the decay heat system may at times be reduced to somewhat less than 2800 gpm. In this situation, if water with a boron concentration equal to or greater than the boron concentration required by Specification 3.9.1 is added to the RCS, the RCS is assured to remain above the Specification 3.9.1 requirement, and a flowrate of less than 2800 gpm is not of concern.

3/4.9.9 CONTAINMENT PURGE AND EXHAUST ISOLATION SYSTEM

Deleted

3/4.9.10 and 3/4.9.11 WATER LEVEL - REACTOR VESSEL AND STORAGE POOL

The restrictions on minimum water level ensure that sufficient water depth is available to remove 99% of the iodine gap activity released from the rupture of an irradiated fuel assembly. The minimum water depth is consistent with the assumptions of the safety analysis.

3/4.9.12 STORAGE POOL VENTILATION

The requirements on the emergency ventilation system servicing the storage pool area to be operating or OPERABLE ensure that all radioactive material released from an irradiated fuel assembly will be filtered through the HEPA filters and charcoal adsorber prior to discharge to the atmosphere. The OPERABILITY of this system and the resulting iodine removal capacity are consistent with the assumptions of the safety analyses.

Specification 3.9.12 permits an emergency ventilation system servicing the storage pool that is incapable of meeting the acceptance criteria of Surveillance Requirement 4.9.12.1 solely because the containment equipment hatch is open and both doors of the containment personnel air lock are open to be considered OPERABLE provided at least one personnel air lock door is capable of being closed and a designated individual is available immediately outside the personnel air lock to close the door. When the containment equipment hatch is open and both doors of the containment personnel air lock are open, the emergency ventilation system servicing the fuel storage area is incapable of maintaining a negative pressure of $\geq$ 1/8 inches Water Gauge relative to the outside atmosphere during system operation. The requirement that at least one personnel air lock door be capable of being closed and a designated individual be available immediately outside the personnel air lock to close the door ensures that the negative pressure boundary can be established in a timely manner following a fuel handling accident in the storage pool area or containment. Once the negative pressure boundary is established, the emergency ventilation system servicing the storage pool area will be capable of establishing the required negative pressure relative to the outside atmosphere.

3/4.9.13 SPENT FUEL ASSEMBLY STORAGE

The restrictions on the placement of fuel assemblies within the spent fuel pool~~, cask pit, and transfer pit,~~ as dictated by Figure 3.9-1~~, Figure 3.9-2, and Figure 3.9-3,~~ ensure that the k-effective of the spent fuel pool~~, cask pit, and transfer pit~~ will always remain less than 0.95 assuming the spent fuel pool~~, cask pit, and transfer pit~~ to be flooded with non-borated water. The restrictions delineated in Figure 3.9-1~~, Figure 3.9-2, and Figure 3.9-3,~~ and the action statement, are consistent with the criticality safety analyses performed for the spent fuel pool~~, cask pit, and transfer pit~~. ~~The term "directly adjacent" as used in Figure 3.9-1 refers to fuel assemblies stored face-to-face.~~

The criticality analyses qualify the high density rack modules for storage of fuel assemblies in one of three different loading patterns, subject to certain restrictions: Mixed Zone Three Region, Checkerboard, and Homogeneous Loading. Figure 3.9-~~3~~1 provides the Category-specific burnup/enrichment limitations. Different loading patterns may be used in different rack modules, provided each rack module contains only one loading pattern. Two different loading patterns may be used in a single rack module, subject to certain additional restrictions. The loading pattern restrictions are maintained in fuel handling administrative procedures.

~~The design features of the low density spent fuel storage racks are described in Specification 5.6.1.1.~~ The design features of the high density spent fuel storage racks are described in Specification 5.6.1.2~~3~~.

Docket Number 50-346
License Number NPF-3
Serial Number 3099
Enclosure 2

COMMITMENT LIST

The following list identifies those actions committed to by the Davis-Besse Nuclear Power Station (DBNPS) in this document. Any other actions discussed in the submittal represent intended or planned actions by the DBNPS. They are described only for information and are not regulatory commitments. Please notify the Supervisor - Licensing (330-315-6944) of any questions regarding this document or any associated regulatory commitments.

COMMITMENTS	DUE DATE
The requirements of TS 3/4.9.7 will be relocated to the TRM.	Upon implementation of the amendment.