

CERTIFICATE OF COMPLIANCE NO. 1040

APPENDIX C

TECHNICAL SPECIFICATIONS

**FOR THE STORAGE OF 24PT1-DSC IN HI-STORM UMAX CANISTER STORAGE
SYSTEM**

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1.0 USE AND APPLICATION

-----NOTE-----

The defined terms of this section appear in capitalized type and are applicable throughout these Technical Specifications and Bases.

1.1 Definitions

| <u>Term</u> | <u>Definition</u> |
|--|---|
| ACTIONS | ACTIONS shall be that part of a Specification that prescribes Required Actions to be taken under designated Conditions within specified Completion Times. |
| AMBIENT TEMPERATURE | AMBIENT TEMPERATURE for Short Term Operations (operations involving use of the HI-TRAC, a Lifting device, and/or an on-site transport device) is defined as the 24 hour average of the local temperature as forecast by the National Weather Service. |
| CANISTER TRANSFER | CANISTER TRANSFER begins when the CHA containing the canister is lifted off the TRANSFER CASK bottom lid and ends when the canister is supported from beneath by the OVERPACK (or the reverse). |
| DAMAGED FUEL ASSEMBLY (for 24PT1-DSC only) | DAMAGED FUEL ASSEMBLY is a fuel assembly with known or suspected cladding defects greater than pinhole leaks or hairline cracks or an assembly with partial or missing rods. |
| DRY SHIELDED CANISTER (DSC) | DSC is a welded pressure vessel that provides confinement of INTACT or DAMAGED FUEL ASSEMBLIES in an inert atmosphere |
| FAILED FUEL CAN | A FAILED FUEL CAN confines any loose material and gross fuel particles to a known, subcritical volume during normal, off-normal and accident conditions and facilitates handling and retrievability. |
| FUEL DEBRIS (24PT1) | An intact or partial fuel rod not contained in a fuel assembly grid or an individual intact or partial fuel pellet not contained in a fuel rod. FUEL DEBRIS may be inserted in a ROD STORAGE BASKET. |

1.1 Definitions

| <u>Term</u> | <u>Definition</u> |
|---|--|
| FUEL BUILDING | The FUEL BUILDING is the site-specific power plant facility, governed by the regulations of 10 CFR Part 50, where the loaded OVERPACK or TRANSFER CASK is transferred to or from the transporter. |
| INTACT FUEL ASSEMBLY (24PT1) | Spent nuclear fuel assemblies without known or suspected cladding defects greater than pinhole leaks or hairline cracks and which can be handled by normal means. |
| INDEPENDENT SPENT FUEL STORAGE INSTALLATION (ISFSI) | The facility within a perimeter fence licensed for storage of spent fuel. |
| LOADING OPERATIONS | LOADING OPERATIONS include all licensed activities on a TRANSFER CASK while it is being loaded with fuel assemblies. LOADING OPERATIONS begin when the first fuel assembly is placed in the canister and end when the TRANSFER CASK is suspended from or secured on the transporter. LOADING OPERATIONS does not include MPC TRANSFER. |
| OVERPACK | For the HI-STORM UMAX, the term OVERPACK is synonyms with the term VVM defined below. |
| RECONSTITUED FUEL ASSEMBLY (24PT1) | RECONSTITUTED FUEL ASSEMBLIES include assemblies in which leaking fuel rods are replaced with either stainless steel rods or intact fuel rods, and which could undergo further irradiation |
| ROD STORAGE BASKET | A 9x9 array of tubes in a lattice that has approximately the same dimensions as a standard fuel assembly |
| SPENT FUEL STORAGE CASKS (SFSCs) | SFSCs are containers approved for the storage of spent fuel assemblies at the ISFSI. The HI-STORM UMAX SFSC System consists of the OVERPACK and its integral canister. |
| STORAGE OPERATIONS | STORAGE OPERATIONS include all licensed activities that are performed at the ISFSI while an SFSC containing spent fuel is situated within the ISFSI perimeter. STORAGE OPERATIONS does not include CANISTER TRANSFER. |

1.1 Definitions

| <u>Term</u> | <u>Definition</u> |
|----------------------------------|--|
| TRANSFER CASK | TRANSFER CASKS are containers designed to contain the canister during and after loading of spent fuel assemblies, and prior to and during unloading and to transfer the canister to or from the OVERPACK. |
| TRANSPORT OPERATIONS | TRANSPORT OPERATIONS include all licensed activities performed on a TRANSFER CASK loaded with one or more fuel assemblies when it is being moved after LOADING OPERATIONS or before UNLOADING OPERATIONS. TRANSPORT OPERATIONS begin when the TRANSFER CASK is first suspended from or secured on the transporter and end when the TRANSFER CASK is at its destination and no longer secured on or suspended from the transporter. TRANSPORT OPERATIONS includes DSC TRANSFER. |
| VERTICAL VENTILATED MODULE (VVM) | The VVM is a subterranean type overpack which receives and contains the sealed canister for interim storage at the ISFSI. The VVM supports the MPC in a vertical orientation and provide gamma and neutron shielding and also provides air flow through cooling passages to promote heat transfer from the MPC to the environs. |
| UNLOADING OPERATIONS | UNLOADING OPERATIONS include all licensed activities on an SFSC to be unloaded of the contained fuel assemblies. UNLOADING OPERATIONS begin when the TRANSFER CASK is no longer suspended from or secured on the transporter and end when the last fuel assembly is removed from the SFSC. UNLOADING OPERATIONS does not include MPC TRANSFER. |
| ZR | ZR means any zirconium-based fuel cladding or fuel channel material authorized for use in a commercial nuclear power plant reactor. |

1.0 USE AND APPLICATION

1.2 Logical Connectors

| | |
|------------|---|
| PURPOSE | The purpose of this section is to explain the meaning of logical connectors. |
| | Logical connectors are used in Technical Specifications (TS) to discriminate between, and yet connect, discrete Conditions, Required Actions, Completion Times, Surveillances, and Frequencies. The only logical connectors that appear in TS are <u>AND</u> and <u>OR</u> . The physical arrangement of these connectors constitutes logical conventions with specific meanings. |
| BACKGROUND | Several levels of logic may be used to state Required Actions. These levels are identified by the placement (or nesting) of the logical connectors and by the number assigned to each Required Action. The first level of logic is identified by the first digit of the number assigned to a Required Action and the placement of the logical connector in the first level of nesting (i.e., left justified with the number of the Required Action). The successive levels of logic are identified by additional digits of the Required Action number and by successive indentions of the logical connectors. |
| | When logical connectors are used to state a Condition, Completion Time, Surveillance, or Frequency, only the first level of logic is used, and the logical connector is left justified with the statement of the Condition, Completion Time, Surveillance, or Frequency. |

1.2 Logical Connectors (continued)

EXAMPLES

The following examples illustrate the use of logical connectors.

EXAMPLE 1.2-1

ACTIONS

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|-----------------|---|-----------------|
| A. LCO not met. | A.1 VERIFY . . . <u>AND</u> A.2 Restore . . . | |

In this example the logical connector AND is used to indicate that when in Condition A, both Required Actions A.1 and A.2 must be completed.

(continued)

1.2 Logical Connectors

EXAMPLES
(continued)EXAMPLE 1.2-2

ACTIONS

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|-----------------|---|-----------------|
| A. LCO not met. | A.1 Stop . . . <u>OR</u> A.2.1 Verify . . . <u>AND</u> A.2.2.1 Reduce . . . <u>OR</u> A.2.2.2 Perform . . . <u>OR</u> A.3 Remove . . . | |

This example represents a more complicated use of logical connectors. Required Actions A.1, A.2, and A.3 are alternative choices, only one of which must be performed as indicated by the use of the logical connector OR and the left justified placement. Any one of these three ACTIONS may be chosen. If A.2 is chosen, then both A.2.1 and A.2.2 must be performed as indicated by the logical connector AND. Required Action A.2.2 is met by performing A.2.2.1 or A.2.2.2. The indented position of the logical connector OR indicates that A.2.2.1 and A.2.2.2 are alternative choices, only one of which must be performed.

1.0 USE AND APPLICATION

1.3 Completion Times

| | |
|-------------|--|
| PURPOSE | The purpose of this section is to establish the Completion Time convention and to provide guidance for its use. |
| BACKGROUND | Limiting Conditions for Operation (LCOs) specify the lowest functional capability or performance levels of equipment required for safe operation of the facility. The ACTIONS associated with an LCO state Conditions that typically describe the ways in which the requirements of the LCO can fail to be met. Specified with each stated Condition are Required Action(s) and Completion Times(s). |
| DESCRIPTION | <p>The Completion Time is the amount of time allowed for completing a Required Action. It is referenced to the time of discovery of a situation (e.g., equipment or variable not within limits) that requires entering an ACTIONS Condition unless otherwise specified, providing the HI-STORM UMAX System is in a specified condition stated in the Applicability of the LCO. Required Actions must be completed prior to the expiration of the specified Completion Time. An ACTIONS Condition remains in effect and the Required Actions apply until the Condition no longer exists or the HI-STORM UMAX System is not within the LCO Applicability.</p> <p>Once a Condition has been entered, subsequent subsystems, components, or variables expressed in the Condition, discovered to be not within limits, will <u>not</u> result in separate entry into the Condition unless specifically stated. The Required Actions of the Condition continue to apply to each additional failure, with Completion Times based on initial entry into the Condition.</p> |

(continued)

1.3 Completion Times (continued)

EXAMPLES

The following examples illustrate the use of Completion Times with different types of Conditions and changing Conditions.

EXAMPLE 1.3-1

ACTIONS

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|--|--------------------------------------|-----------------|
| B. Required Action and associated Completion Time not met. | B.1 Perform Action B.1 | 12 hours |
| | <u>AND</u> B.2 Perform Action B.2 | 36 hours |

Condition B has two Required Actions. Each Required Action has its own separate Completion Time. Each Completion Time is referenced to the time that Condition B is entered.

The Required Actions of Condition B are to complete action B.1 within 12 hours AND complete action B.2 within 36 hours. A total of 12 hours is allowed for completing action B.1 and a total of 36 hours (not 48 hours) is allowed for completing action B.2 from the time that Condition B was entered. If action B.1 is completed within 6 hours, the time allowed for completing action B.2 is the next 30 hours because the total time allowed for completing action B.2 is 36 hours.

(continued)

1.3 Completion Times (continued)

EXAMPLES
(continued)EXAMPLE 1.3-2

ACTIONS

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|--|--|-----------------|
| A. One system not within limit. | A.1 Restore system to within limit. | 7 days |
| B. Required Action and associated Completion Time not met. | B.1 Complete action B.1. | 12 hours |
| | <u>AND</u> B.2 Complete action B.2. | 36 hours |

When a system is determined not to meet the LCO, Condition A is entered. If the system is not restored within 7 days, Condition B is also entered and the Completion Time clocks for Required Actions B.1 and B.2 start. If the system is restored after Condition B is entered, Conditions A and B are exited, and therefore, the Required Actions of Condition B may be terminated.

(continued)

1.3 Completion Times (continued)

EXAMPLES
(continued)

EXAMPLE 1.3-3

ACTIONS

-----NOTE-----

Separate Condition entry is allowed for each component.

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|--|--|-----------------|
| A. LCO not met. | A.1 Restore compliance with LCO. | 4 hours |
| B. Required Action and associated Completion Time not met. | B.1 Complete action B.1. | 6 hours |
| | <u>AND</u> B.2 Complete action B.2. | 12 hours |

The Note above the ACTIONS table is a method of modifying how the Completion Time is tracked. If this method of modifying how the Completion Time is tracked was applicable only to a specific Condition, the Note would appear in that Condition rather than at the top of the ACTIONS Table.

The Note allows Condition A to be entered separately for each component, and Completion Times tracked on a per component basis. When a component is determined to not meet the LCO, Condition A is entered and its Completion Time starts. If subsequent components are determined to not meet the LCO, Condition A is entered for each component and separate Completion Times start and are tracked for each component.

(continued)

1.3 Completion Times (continued)

| | |
|---------------------------------|--|
| IMMEDIATE COMPLETION TIME | When "Immediately" is used as a Completion Time, the Required Action should be pursued without delay and in a controlled manner. |
|---------------------------------|--|

1.0 USE AND APPLICATION

1.4 Frequency

| | |
|-------------|---|
| PURPOSE | The purpose of this section is to define the proper use and application of Frequency requirements. |
| DESCRIPTION | <p>Each Surveillance Requirement (SR) has a specified Frequency in which the Surveillance must be met in order to meet the associated Limiting Condition for Operation (LCO). An understanding of the correct application of the specified Frequency is necessary for compliance with the SR.</p> <p>The "specified Frequency" is referred to throughout this section and each of the Specifications of Section 3.0, Surveillance Requirement (SR) Applicability. The "specified Frequency" consists of the requirements of the Frequency column of each SR.</p> <p>Situations where a Surveillance could be required (i.e., its Frequency could expire), but where it is not possible or not desired that it be performed until sometime after the associated LCO is within its Applicability, represent potential SR 3.0.4 conflicts. To avoid these conflicts, the SR (i.e., the Surveillance or the Frequency) is stated such that it is only "required" when it can be and should be performed. With an SR satisfied, SR 3.0.4 imposes no restriction.</p> |

(continued)

1.4 Frequency (continued)

EXAMPLES

The following examples illustrate the various ways that Frequencies are specified.

EXAMPLE 1.4-1

SURVEILLANCE REQUIREMENTS

| SURVEILLANCE | FREQUENCY |
|------------------------------|-----------|
| Verify pressure within limit | 12 hours |

Example 1.4-1 contains the type of SR most often encountered in the Technical Specifications (TS). The Frequency specifies an interval (12 hours) during which the associated Surveillance must be performed at least one time. Performance of the Surveillance initiates the subsequent interval. Although the Frequency is stated as 12 hours, an extension of the time interval to 1.25 times the interval specified in the Frequency is allowed by SR 3.0.2 for operational flexibility. The measurement of this interval continues at all times, even when the SR is not required to be met per SR 3.0.1 (such as when the equipment or variables are outside specified limits, or the facility is outside the Applicability of the LCO). If the interval specified by SR 3.0.2 is exceeded while the facility is in a condition specified in the Applicability of the LCO, the LCO is not met in accordance with SR 3.0.1.

If the interval as specified by SR 3.0.2 is exceeded while the facility is not in a condition specified in the Applicability of the LCO for which performance of the SR is required, the Surveillance must be performed within the Frequency requirements of SR 3.0.2 prior to entry into the specified condition. Failure to do so would result in a violation of SR 3.0.4

(continued)

1.4 Frequency (continued)

EXAMPLES
(continued)EXAMPLE 1.4-2

SURVEILLANCE REQUIREMENTS

| SURVEILLANCE | FREQUENCY |
|-------------------------------|--|
| Verify flow is within limits. | Once within 12 hours prior to starting activity <u>AND</u> 24 hours thereafter |

Example 1.4-2 has two Frequencies. The first is a one time performance Frequency, and the second is of the type shown in Example 1.4-1. The logical connector "AND" indicates that both Frequency requirements must be met. Each time the example activity is to be performed, the Surveillance must be performed within 12 hours prior to starting the activity.

The use of "once" indicates a single performance will satisfy the specified Frequency (assuming no other Frequencies are connected by "AND"). This type of Frequency does not qualify for the 25% extension allowed by SR 3.0.2.

"Thereafter" indicates future performances must be established per SR 3.0.2, but only after a specified condition is first met (i.e., the "once" performance in this example). If the specified activity is canceled or not performed, the measurement of both intervals stops. New intervals start upon preparing to restart the specified activity.

2.0

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3.0 LIMITING CONDITIONS FOR OPERATION (LCO) APPLICABILITY

| | |
|-----------|--|
| LCO 3.0.1 | LCOs shall be met during specified conditions in the Applicability, except as provided in LCO 3.0.2. |
| LCO 3.0.2 | <p>Upon discovery of a failure to meet an LCO, the Required Actions of the associated Conditions shall be met, except as provided in LCO 3.0.5.</p> <p>If the LCO is met or is no longer applicable prior to expiration of the specified Completion Time(s), completion of the Required Action(s) is not required, unless otherwise stated.</p> |
| LCO 3.0.3 | Not applicable. |
| LCO 3.0.4 | When an LCO is not met, entry into a specified condition in the Applicability shall not be made except when the associated ACTIONS to be entered permit continued operation in the specified condition in the Applicability for an unlimited period of time. This Specification shall not prevent changes in specified conditions in the Applicability that are required to comply with ACTIONS or that are related to the unloading of an SFSC. |
| LCO 3.0.5 | Equipment removed from service or not in service in compliance with ACTIONS may be returned to service under administrative control solely to perform testing required to demonstrate it meets the LCO or that other equipment meets the LCO. This is an exception to LCO 3.0.2 for the system returned to service under administrative control to perform the testing. |

3.0 SURVEILLANCE REQUIREMENT (SR) APPLICABILITY

- SR 3.0.1 SRs shall be met during the specified conditions in the Applicability for individual LCOs, unless otherwise stated in the SR. Failure to meet a Surveillance, whether such failure is experienced during the performance of the Surveillance or between performances of the Surveillance, shall be failure to meet the LCO. Failure to perform a Surveillance within the specified Frequency shall be failure to meet the LCO except as provided in SR 3.0.3. Surveillances do not have to be performed on equipment or variables outside specified limits.
-
- SR 3.0.2 The specified Frequency for each SR is met if the Surveillance is performed within 1.25 times the interval specified in the Frequency, as measured from the previous performance or as measured from the time a specified condition of the Frequency is met.
- For Frequencies specified as “once,” the above interval extension does not apply. If a Completion Time requires periodic performance on a “once per...” basis, the above Frequency extension applies to each performance after the initial performance.
- Exceptions to this Specification are stated in the individual Specifications.
-
- SR 3.0.3 If it is discovered that a Surveillance was not performed within its specified Frequency, then compliance with the requirement to declare the LCO not met may be delayed, from the time of discovery, up to 24 hours or up to the limit of the specified Frequency, whichever is less. This delay period is permitted to allow performance of the Surveillance.
- If the Surveillance is not performed within the delay period, the LCO must immediately be declared not met, and the applicable Condition(s) must be entered.
-

(continued)

3.0 SURVEILLANCE REQUIREMENT (SR) APPLICABILITY

SR 3.0.3
(continued) When the Surveillance is performed within the delay period and the Surveillance is not met, the LCO must immediately be declared not met, and the applicable Condition(s) must be entered.

SR 3.0.4 Entry into a specified condition in the Applicability of an LCO shall not be made unless the LCO's Surveillances have been met within their specified Frequency. This provision shall not prevent entry into specified conditions in the Applicability that are required to comply with Actions or that are related to the unloading of an SFSC.

3.1 SFSC INTEGRITY

3.1.1 SFSC Heat Removal System

LCO 3.1.1 The SFSC Heat Removal System shall be operable

-----NOTE-----

The SFSC Heat Removal System is operable when 50% or more of the inlet vent duct areas are unblocked and available for flow or when air temperature requirements are met.

APPLICABILITY: During STORAGE OPERATIONS.

ACTIONS

-----NOTE-----

Separate Condition entry is allowed for each SFSC.

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|---|--|--|
| A. SFSC Heat Removal System operable, but partially (<50%) blocked. | A.1 Remove blockage. | N/A |
| B. SFSC Heat Removal System inoperable. | B.1 Restore SFSC Heat Removal System to operable status. | 8 hours |
| C. Required Action B.1 and associated Completion Time not met. | C.1 Measure SFSC dose rates in accordance with the Radiation Protection Program. | Immediately and once per 12 hours thereafter |
| | <u>AND</u> C.2.1 Restore SFSC Heat Removal System to operable status. | 64 hours |
| | <u>OR</u> C.2.2 Transfer the DSC into a TRANSFER CASK. | 64 hours |

SURVEILLANCE REQUIREMENTS

| SURVEILLANCE | | FREQUENCY |
|--------------|--|-----------|
| SR 3.1.2 | Verify all VVM inlets and outlets duct screen are free of blockage from solid debris or floodwater. | 24 hours |
| | <u>OR</u> For VVMs with installed temperature monitoring equipment, verify that the difference between the average VVM air outlet duct temperature and ISFSI ambient temperature is $\leq 49^{\circ}\text{F}$ for VVMs containing 24PT1-DSCs. | 24 hours |

4.0

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5.0 ADMINISTRATIVE CONTROLS AND PROGRAMS

The following programs shall be established, implemented and maintained.

5.1 Radioactive Effluent Control Program

This program implements the requirements of 10 CFR 72.44(d).

- a. The HI-STORM UMAX Canister Storage System does not create any radioactive materials or have any radioactive waste treatment systems. Therefore, specific operating procedures for the control of radioactive effluents are not required.
- b. This program includes an environmental monitoring program. Each general license user may incorporate SFSC operations into their environmental monitoring programs for 10 CFR Part 50 operations.
- c. An annual report shall be submitted pursuant to 10 CFR 72.44(d)(3).

(continued)

5.0 ADMINISTRATIVE CONTROLS AND PROGRAMS (continued)

5.2 Transport Evaluation Program

- a. For lifting of the loaded CHA or TRANSFER CASK using equipment which is integral to a structure governed by 10 CFR Part 50 regulations, 10 CFR 50 requirements apply.
- b. This program is not applicable when the TRANSFER CASK is in the FUEL BUILDING or is being handled by equipment providing support from underneath (i.e., on a rail car, heavy haul trailer, air pads, etc...).
- c. The TRANSFER CASK when loaded with spent fuel, may be lifted to and carried at any height necessary during TRANSPORT OPERATIONS and CANISTER TRANSFER, provided the lifting equipment is designed in accordance with items 1, 2, and 3 below.
 1. The metal body and any vertical columns of the lifting equipment shall be designed to comply with stress limits of ASME Section III, Subsection NF, Class 3 for linear structures. All vertical compression loaded primary members shall satisfy the buckling criteria of ASME Section III, Subsection NF.
 2. The horizontal cross beam and any lifting attachments used to connect the load to the lifting equipment shall be designed, fabricated, operated, tested, inspected, and maintained in accordance with applicable sections and guidance of NUREG-0612, Section 5.1. This includes applicable stress limits from ANSI N14.6.
 3. The lifting equipment shall have redundant drop protection features which prevent uncontrolled lowering of the load.

5.0 ADMINISTRATIVE CONTROLS AND PROGRAMS (continued)

5.3 Radiation Protection Program

- 5.3.1 Each cask user shall ensure that the Part 50 radiation protection program appropriately addresses dry storage cask loading and unloading, as well as ISFSI operations, including transport of the loaded TRANSFER CASK outside of facilities governed by 10 CFR Part 50. The radiation protection program shall include appropriate controls for direct radiation and contamination, ensuring compliance with applicable regulations, and implementing actions to maintain personnel occupational exposures As Low As Reasonably Achievable (ALARA). The actions and criteria to be included in the program are provided below.
- 5.3.2 As part of its evaluation pursuant to 10 CFR 72.212(b)(2)(i)(C), the licensee shall perform an analysis to confirm that the dose limits of 10 CFR 72.104(a) will be satisfied under the actual site conditions and ISFSI configuration, considering the planned number of casks to be deployed and the cask contents.
- 5.3.3 Based on the analysis performed pursuant to Section 5.3.2, the licensee shall establish individual cask surface dose rate limits for the TRANSFER CASK and the VVM to be used at the site. Total (neutron plus gamma) dose rate limits shall be established at the following locations:
- a. The top of the VVM.
 - b. The side of the TRANSFER CASK
 - c. The outlet vents on the VVM
- 5.3.4 Notwithstanding the limits established in Section 5.3.3, the average of the measured dose rates on a loaded VVM or TRANSFER CASK shall not exceed the following values:
- a. 30 mrem/hr (gamma + neutron) on the top of the closure lid of the VVM
 - b. 3500 mrem/hr (gamma + neutron) on the side of the TRANSFER CASK
- 5.3.5 The licensee shall measure the TRANSFER CASK and VVM surface neutron and gamma dose rates as described in Section 5.3.8 for comparison against the limits established in Section 5.3.3 or Section 5.3.4, whichever are lower.

5.0 ADMINISTRATIVE CONTROLS AND PROGRAMS (continued)

5.3 Radiation Protection Program (continued)

- 5.3.6 If the measured surface dose rates exceed the lower of the two limits established in Section 5.3.3 or Section 5.3.4, the licensee shall:
- a. Administratively verify that the correct contents were loaded in the correct fuel storage cell locations.
 - b. Perform a written evaluation to verify whether a VVM at the ISFSI containing the as-loaded DSC will cause the dose limits of 10 CFR 72.104 to be exceeded.
 - c. Perform a written evaluation within 30 days to determine why the surface dose rate limits were exceeded.
- 5.3.7 If the evaluation performed pursuant to Section 5.3.6 shows that the dose limits of 10 CFR 72.104 will be exceeded, the DSC shall not be placed into a VVM or the DSC shall be removed from the VVM until appropriate corrective action is taken to ensure the dose limits are not exceeded.
- 5.3.8 TRANSFER CASK and VVM surface dose rates shall be measured at approximately the following locations:
- a. A minimum of four (4) dose rate measurements shall be taken on the top of the VVM. These measurements shall be taken approximately 90 degrees apart around the circumference of the lid, approximately 18 inches radially inward from the edge of the lid.
 - b. A minimum of four (4) dose rate measurements shall be taken adjacent to the outlet vent duct screen of the VVM, approximately 90 degrees apart.
 - c. A minimum of four (4) dose rate measurements shall be taken on the side of the TRANSFER CASK approximately at the cask mid-height plane. The measurement locations shall be approximately 90 degrees apart around the circumference of the cask. Dose rates shall be measured between the radial ribs of the water jacket.

5.0 ADMINISTRATIVE CONTROLS AND PROGRAMS (continued)

5.3 Radiation Protection Program (continued)

5.3.9 The "Radiation Protection Space" (RPS) is the prismatic subgrade buffer zone surrounding the VVMs in a loaded ISFSI. The RPS boundary is indicated in the Licensing Drawings in Section 1.5 of the system FSAR. The RPS boundary shall not be encroached upon during any site construction activity. The jurisdictional boundary of the RPS extends down from the top of the ISFSI pad to the elevation of the Bottom surface of the Support Foundation Pad. The ISFSI design shall ensure that there is no significant loss of shielding in the RPS due to a credible accident or an extreme environment event during construction activity involving excavation adjacent to the RPS boundary.

5.4 DSC Verification Requirements

Prior to storage in the HI-STORM UMAX System the following records verifications must be performed:

- 5.4.1 Verify through review of records that the DSC has been **fabricated and** loaded in accordance with the applicable limits in CoC 72-1029, including but not limited to helium backfill requirements and heat load limits.
 - 5.4.2 Verify through review of records that the loaded DSC is within its initial 20 year license life.
 - 5.4.3 Verify through review of records that the DSC has not undergone transportation under Part 71.
-