REMOVE Section 4.1.2.2 on pages 4-5 to 4-6 of the SER and INSERT:

4.1.2.2 Classification of Structures, Systems, and Components – Items Not Important to Safety

Based on SAR Table 3.4-1, the classification of structures, systems, and components not important to safety includes items or services that do not involve a safety related function and that are not subject to special utility requirements or NRC-imposed regulatory requirements.

Structures, systems, and components not important to safety include: the PFS Facility infrastructure, Security and Heath Physics Building, Administration Building, Operations and Maintenance Building, fire detection and suppression systems, security systems, electrical systems, radiation monitors, temperature monitoring system, flood control berm, cask transporter, and offsite transportation components. The storage facility infrastructure, buildings, and facilities are necessary to support operation of the Facility. However, they are not necessary to ensure safe storage of the spent fuel because the storage cask system is passive. Therefore, they are classified as not important to safety.

The fire detection and suppression systems are contained within the Canister Transfer Building. The construction materials of the Canister Transfer Building do not support combustion, and the fire-prone materials are limited to diesel fuel and tires of the heavy haul trucks. Fires are analyzed in the accident analysis section of the SAR. The area surrounding the storage pads and Canister Transfer Building includes a gravel-covered fire break with vegetation control to limit potential fuel for fires. The nonflammable nature of the materials of construction, other passive design features, and the limited fuel sources at the Facility lead to the conclusion that the fire detection and suppression systems are correctly classified as not important to safety.

There are a number of systems that are security related: intrusion detection system, closed circuit television system, restricted area lighting, and security alarm stations. Each system is used to support the activities of the security personnel who monitor the controlled area of the facility. If systems fail, the security personnel can still perform their required functions. Therefore, the security systems are correctly classified as not important to safety.

Because the HI-STORM 100 storage cask system is a passive system, the uninterrupted power supply, backup diesel generator, and normal electrical power can also be classified as not important to safety. No electrical power is required for the storage system to perform its design functions.

The passive design of the cask also affects classification of the radiation monitors and temperature monitoring system. The radiation monitors are established to protect the health and safety of the workers. It has been demonstrated by analysis that the radiation levels at the site boundary will be below those identified in the applicable radiation protection regulations.

The public is restricted from access into the controlled area. Therefore, the radiation monitors are correctly classified as not important to public safety.

The thermal monitors track the temperature of the air in the cooling passages of the storage cask. Upon loss of thermal monitoring, an alarm will sound and repair of the monitoring system will begin. The thermal monitoring system is intended to identify blockage of the cask cooling air passages and resulting rise of the cask temperature. The cask, by design, is not adversely affected by complete blockage of the air passages for 72 h. It is not necessary to continuously monitor the temperature since the canister since at least 72 h. must pass before the canister and fuel cladding temperature reach the allowable limits. Therefore, the thermal monitoring system is appropriately classified as not important to safety.

The flood control berm and drainage ditch are to prevent sheet flow over the site, to facilitate maintenance at the site and to maintain access to the casks on the storage pads in case of flooding. The flood control berm is not important to safety because the Facility elevation is above the PMF level. Further, the HI-STORM 100 storage cask is designed to resist the effects of full immersion in flood waters.

The cask transporter is also classified as not important to safety. Potential failure mechanisms of the transporter involve the drive-train, brakes, electrical system, or lift beam hydraulic ram. None of these potential failures would cause the transporter or the cask to tipover. Of these potential failures, only those that could drop the cask would have a possibility of damaging the cask or its internal components. The HI-STORM 100 FSAR (Holtec International, 2000) has demonstrated that the storage cask can be dropped a height of 11 in. without impairing confinement system integrity or fuel retrievability. However, the 11 in. drop height is based on a softer pad than is proposed at the PFS Facility. The cask storage pads at the proposed PFS Facility will be stiffer due to increased stiffness of the soil-cement layer overlaying the existing soil. Therefore, the applicant has stated that the transporter will be designed to limit the lift height of the cask to 9 in. This height is based on site-specific analyses of drop events on the PFS Facility storage pads to estimate the limiting deceleration level on the fuel rods (Holtec International, 2001). As calculated by PFS, a vertical drop of the PFS cask upon the cask storage pad, up to 9 in. will produce decelerations bounded by the 45g design basis. The cask transporter will also be designed to preclude tipover under site-specific seismic, tornado winds, and tornado missile loads. Therefore, the cask transporter can be classified as an item not important to safety.

Another group of structures, systems, and components that are classified as not important to safety are the road transport and railroad line alternatives. These are classified as such because the shipping casks that will be used to transport the spent fuel are designed and approved under 10 CFR Part 71. Transportation equipment is outside the scope of this review.

REMOVE Table 4-6 in Section 4.1.3.2 on pages 4.13 and 4.14 of the SER and INSERT:

Table 4-6. Summary of Private Fuel Storage Facility Design Criteria—Structural Design Loads (Based on SAR Table 3.6-1)

Design Parameters	PFS Facility Design Criteria	Applicable Criteria and Codes	HI-STORM 100 MPC Design Criteria (HI-STORM 100 FSAR, Table 2.0.1)	HI-STORM 100 Overpack Design Criteria (HI-STORM FSAR, Table 2.0.2)	HI-TRAC Transfer Cask Design Criteria (HI-STORM 100 FSAR, Table 2.0.3)
Wind	90 mph, normal speed	ASCE–7 (0.02 annual frequency)	Protected by overpack	Enveloped by Tornado Wind	Protected in transfer facility
Tornado	240 mph, maximum speed 190 mph, rotational speed 50 mph, translational speed 150 ft, radius of maximum speed 1.5 psi, pressure drop 0.6 psi/sec rate of drop	Regulatory Guide 1.76	Protected by overpack	360 mph, maximum speed 290 mph, rotational speed 70 mph, translational speed 3.0 psi, pressure drop	Protected in transfer facility
Tornado Missiles	3990 lb automobile, 134 ft/sec 750 lb 12 in. schedule 40 pipe, 23 ft/sec 1124 lb wooden utility pole, 85 ft/sec 9 lb 1 in. diameter steel rod, 26 ft/sec 287 lb 6 in. schedule 40 pipe, 33 ft/sec 115 lb wood plank, 190 ft/sec	NUREG–0800, Section 3.5.1.4	Protected by overpack	3990 lb automobile, 185 ft/sec 275 lb 8 in. rigid solid steel cylinder, 185 ft/sec 1 in. diameter steel sphere, 185 ft/sec	3990 lb automobile, 185 ft/sec 275 lb 8 in. rigid solid steel cylinder, 185 ft/sec 1 in. diameter steel sphere, 185 ft/sec
Flood	PFS Facility is not in a flood plain and is above the PMF elevation. Details contained in Section 2.3.2.3 of the PFS Facility SAR.	NUREG–0800, Section 3.4.1	125 ft. water depth	125 ft. flood height 15 ft/sec flood velocity	Protected in transfer facility

Table 4-6. Summary of Private Fuel Storage Facility Design Criteria—Structural Design Loads (Based on SAR Table 3.6-1)

Design Parameters	PFS Facility Design Criteria	Applicable Criteria and Codes	HI-STORM 100 MPC Design Criteria (HI-STORM 100 FSAR, Table 2.0.1)	HI-STORM 100 Overpack Design Criteria (HI-STORM FSAR, Table 2.0.2)	HI-TRAC Transfer Cask Design Criteria (HI-STORM 100 FSAR, Table 2.0.3)
Seismic	PGA of 0.711g, horizontal (both directions) and 0.695g vertical. Probabilistic design basis ground acceleration identified in Section 2.6 of the PFS Facility SAR.	10 CFR 72.102	$G_H + 0.53\ G_V \leq 0.53$	$G_H + 0.53\ G_V \leq 0.53$	NA
Snow and Ice	P(g) = 45 psf	ASCE–7, Tooele County Building Department	Protected by Overpack	100 psf	Protected in transfer facility
Allowable Soil Pressure	Static = 4 ksf max Dynamic = Varies by footing type/size. Details contained in Section 2.6.1.12 of the SAR.	NUREG–0800, Section 2.5.4	NA	NA	NA
Explosion Overpressure	The PFS Facility design and layout shall assure that the peak positive incident overpressure at important to safety structures, systems, and components does not exceed 1.0 psi from credible and offsite explosions.	Reg. Guide 1.91	60 psig (external)	10 psid for 1 seconds 5 psid steady state	NA

Table 4-6. Summary of Private Fuel Storage Facility Design Criteria—Structural Design Loads (Based on SAR Table 3.6-1)

Design Parameters	PFS Facility Design Criteria	Applicable Criteria and Codes	HI-STORM 100 MPC Design Criteria (HI-STORM 100 FSAR, Table 2.0.1)	HI-STORM 100 Overpack Design Criteria (HI-STORM FSAR, Table 2.0.2)	HI-TRAC Transfer Cask Design Criteria (HI-STORM 100 FSAR, Table 2.0.3)
Ambient Conditions	Low Temperature = –30 °F Max. Annual Average Temp. = 51 °F Average Daily Max. Temp. = 95 °F Humidity = 0–100 percent	National Oceanic and Atmospheric Administration Data–Salt Lake City, Utah, Climate Data	See Tables 2.0.2 and 2.0.3	Min. Ambient Temp. = -40 °F Max. Ambient Temp. = 100 °F Max. Yearly Average Temp. = 80 °F Extreme Environmental Temperature = 125 °F	Min. Ambient Temp. = 0 °F Max. Ambient Temp. = 100 °F Max. Yearly Average Temp. = 100 °F
G_H = peak seismic horizontal ground acceleration G_V = peak seismic vertical ground acceleration NA = not applicable					

REMOVE the section entitled "**Tornado"** on page 4-15 of the SER and INSERT:

Tornado

The design basis tornado wind loads are based on information provided in Regulatory Guide 1.76 (U.S. Atomic Energy Commission, 1974). Tooele County is located in Tornado Intensity Region III, as defined by Regulatory Guide 1.76. The parameters for the tornado identified in the SAR are those given in Regulatory Guide 1.76. Based on data provided in SAR Section 2.3.1.3.3, Tornadoes, the most severe tornado observed in the region was classified as F1 with a corresponding wind speed of 73 to 112 mph. The specified design criteria specify greater wind speeds than those observed. Specifically, the PFS Facility design criterion for tornado specifies a maximum speed of 240 mph with an associated pressure drop of 1.5 psi. The probability of a tornado striking the PFS Facility site is given as 1.37×10^{-6} per year in the PFS Facility SAR Section 2.3.1.3.3.

REMOVE the paragraph entitled "**Seismicity**" on page 4-16 of the SER and INSERT:

Seismicity

The staff reviewed the data presented in the SAR associated with seismic design criteria at the Facility. SAR Section 3.2.10, Seismic Design, gives the seismic design criteria, based on probabilistic site-specific seismology studies summarized in SAR Section 2.6, Geology and Seismology. PFS has requested an exemption from the seismic requirement of 10 CFR 72.102(f). Discussions of the implications of this request for exemption are contained in Section 2.1.6 of this SER. The resulting site-specific design response spectra are anchored at a peak ground acceleration (PGA) of 0.711g in both horizontal directions and 0.695g in vertical direction. The horizontal and vertical design response spectra curves have been identified in the Geomatrix Consultants, Inc. report (Geomatrix Consultants, Inc., 2001). The site-specific seismic design criteria of the Facility are not bounded by the HI-STORM 100 seismic design criteria. The seismic design criteria are based on the site-specific probabilistic seismic hazards analysis given in SAR Chapter 2, Site Characteristics, which has been evaluated in Chapter 2 of this SER. The applicant's analysis of the HI-STORM 100 storage cask under the site-specific design basis seismic event is evaluated in Chapters 5 and 15 of this SER. The staff reviewed the seismic design criteria for the Facility and found that they are properly identified as required by 10 CFR 72.120(a) and 72.122(b).

REMOVE Section 4.3 on pages 4-27 to 4-29 of the SER, and INSERT:

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