Enclosure 1
Changes to Hermes 2 PSAR Chapter 9
(Non-Proprietary)

canisters, will be routinely monitored and controlled by the PCS (see Section 7.2) to maintain the desired operational limits. Heat from the SFCS is rejected to the environment. In the event that normal power is not available, the SFCS is capable of passively cooling spent fuel storage canisters. Each unit has its own SFCS and there are no components shared between the units.

The SFCS does not perform safety-related functions and is not credited for the mitigation of postulated events. The SFCS is also not credited with performing safe shutdown functions.

Portions of the SFCS may be located in proximity to SSCs with safety-related functions. Those safety-related SSCs are protected from failure of the SFCS during a design basis earthquake by either seismically mounting the applicable SFCS components, physical separation, or barriers to preclude adverse interactions, consistent with PDC 2. Nearby safety-related SSCs are also protected from the effects of missiles by design. There are also no pressurized piping systems in or around the SFCS thus precluding the design from pipe whip hazards, consistent with PDC 4.

The system has the potential to become contaminated based on its location and system interfaces. Therefore, the system is designed to meet the requirements of 10 CFR 20.1406 to minimize to the extent practicable contamination of the facility and the environment, facilitate eventual decommission and minimize to the extent practicable, the generation of radioactive waste.

9.8.3 Compressed Air System

The compressed air system provides and distributes compressed air for maintenance and use in valve operation. The system includes distribution piping, valves, compressors, coolers, moisture separators, filters, and receivers. The system does not provide compressed air that is credited to perform safety-related functions. The system is designed so that a failure of the system does not interfere or preclude the ability of a safety-related system to perform its safety function. The system does not directly interface with systems that contain or have the potential to contain radioactive materials. Each unit has its own compressed air system and there are no components shared between the units.

9.8.4 Cranes and Rigging

9.8.4.1 Description

A crane and rigging are provided to lift and move equipment within the reactor building and to facilitate equipment and material receiving and shipping. The crane and rigging are also provided to support maintenance activities, including lifting activities with the potential to damage safety-related SSCs in the event of a load drop. The crane and rigging equipment do not perform a safety-related function and are not safety-related. The crane is a gantry crane located in the high bay of the reactor building. Each unit has its own reactor building cranes and rigging and there are no components shared between the units.

9.8.4.2 Design Bases

Consistent with PDC 2, safety-related SSCs located near crane and rigging are protected from the adverse effects of crane and rigging failures during a design basis earthquake.

Consistent with PDC 4, ~~the crane and rigging are designed to protect against~~safety-related SSCs are protected from the dynamic effects potentially created by the failure of the crane and rigging equipment.

9.8.4.3 System Evaluation

Portions of the crane and rigging may be located in proximity to SSCs with safety-related functions. Those safety-related SSCs will be protected from failure of the crane and rigging during a design basis earthquake by either seismically mounting the applicable crane and rigging components, physical

separation, or barriers to preclude adverse interactions. This satisfies the requirements of PDC 2 for the crane and rigging.

~~The crane and rigging will be designed~~Design features are included in the plant design so that a failure of the lifting device does not interfere or preclude the ability of a safety-related system to perform a safety function. The crane design implements ASME B30.2-2016 (Reference 1). When the crane is used to move spent fuel transportation casks, administrative controls and interlocks maintain cask lift elevations within allowable areas to preclude impacts to safety-related SSCs. Also, administrative controls and interlocks prevent the crane and rigging from moving heavy loads over safety-related SSCs except when the reactor is shut down, ~~or~~ and the consequences of a load drop have been evaluated to ensure that it could neither damage stored irradiated fuel to the extent that a significant off-site release would occur, nor preclude operation of sufficient equipment to achieve safe shutdown. These administrative controls ensure that a dropped load does not interfere with or preclude a safety-related SSC's ability to perform its function during operation, which addresses the potential for dynamic effects under PDC 4.

The crane superstructure is designed to remain standing during and after a fire so that failure of the superstructure does not interfere or preclude the ability of a safety-related system to perform its safety function. Further information about the design of the superstructure in the event of a fire will be provided in the operating license application.

The crane is supported by the non-safety portion of the reactor building, which is designed for seismic loads in accordance with local building codes as described in Section 3.5. No parts of the crane supports are on the portion of the reactor building that uses base isolation, i.e., the safety-related portion of the building.

9.8.4.4 Testing and Inspection

Cranes and rigging will be periodically inspected prior to use.

9.8.5 Auxiliary Site Services

Auxiliary site services encompass supportive non-safety related SSCs that provide additional functions necessary to maintain and operate the facility. The services are not credited to mitigate any postulated events. These services include:

- Machine shop(s), which include radioactive and non-radioactive machining capabilities
- Chemistry laboratory
- Post-irradiation examination laboratory
- Materials testing laboratory
- Vents, drains for non-potentially contaminated facility compartments
- Warehouse(s) for storage of spare equipment
- Storage of contaminated equipment
- Facility lighting, including emergency lighting
- Non-hazardous waste management services
- Firewater storage systems
- Storm and sanitary sewers
- Groundwater monitoring wells

These auxiliary site services are designed in accordance with local building code and relevant permits. The services are designed so that they do not interfere with a safety-related SSC's ability to perform its safety function. Portions of the auxiliary site services may be located in proximity to SSCs with safety-related functions. Those safety-related SSCs are protected from failure of the auxiliary site services