DUKE COGEMA
STONE & WEBSTER

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Subject: Docket Number 070-03098
Duke Cogema Stone & Webster
Mixed Oxide (MOX) Fuel Fabrication Facility
Construction Authorization Request Change Pages

Reference: 1) P. S. Hastings (DCS) to Document Control Desk (NRC), *Docket Number 070-03098 Duke Cogema Stone & Webster Mixed Oxide (MOX) Fuel Fabrication Facility Construction Authorization Request*, DCS-NRC-000129, 18 February 2003

Enclosed are change pages for Duke Cogema Stone & Webster's (DCS) request for authorization of construction of the Mixed Oxide (MOX) Fuel Fabrication Facility. The enclosed change pages replace pages in the Construction Authorization Request as updated through Reference 1.

The enclosed change pages do not contain information which is considered to be proprietary to DCS. Enclosure 1 provides twenty-five copies of the change pages, which may be disclosed to the public. Enclosure 2 provides replacement instructions.

The changes are additional clarification of previously closed open items and have been discussed in subsequent telephone conversations with the NRC staff.

If I can provide any additional information, please feel free to contact me at (704) 373-7820.

Sincerely,

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Enclosures: 1) Change Pages to the Mixed Oxide Fuel Fabrication Facility Construction Authorization Request (non-proprietary)
2) Construction Authorization Request 04/01/03 Update Instructions

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Enclosure 1

Change Pages for Mixed Oxide Fuel Fabrication Facility Construction Authorization Request (non-proprietary)

25 copies enclosed

Enclosure 2
Construction Authorization Request
04/01/03 Update Instructions

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5.5.2.3.6.2 AP/MP C3 Glovebox Areas

A load handling event is postulated in an AP/MP C3 glovebox area. The event with the bounding radiological consequences for this event group has been identified to occur within the gloveboxes that contain Jar Storage and Handling of the MOX Powder Workshop. This load handling event is postulated to result in a breach of a glovebox and the subsequent release of PuO_2 polished powder. Gloveboxes are assumed to be impacted by: (1) the lid of a reusable plutonium oxide can, (2) a lifting device, or (3) a lifted load outside of the glovebox causing its contents to drop to the floor.

To reduce the risk to the public and site worker associated with this event group, a safety strategy utilizing mitigation features is adopted. The principal SSC identified to implement this safety strategy is the C3 confinement system. The safety function of the C3 confinement system is to provide filtration to mitigate dispersions from C3 Areas.

The safety strategy and corresponding principal SSCs for the facility worker and the environment are given by consideration of the following cases to which the gloveboxes may be subjected:

- During normal operations, load handling events within gloveboxes that could potentially impact the C4 static boundary
- During normal operations, external glovebox load handling events that could potentially impact the C4 confinement system
- During maintenance operations and special operations (e.g., filter changeout) – [Facility Workers only].

Note: An additional case in which a spill/leak occurs in a glovebox without breaching the glovebox is discussed in Section 5.5.2.3.6.4.

To reduce the risk to the facility worker and the environment during normal operations, a safety strategy utilizing prevention features is adopted. The principal SSCs identified to implement this safety strategy are material handling controls, the glovebox, and material handling equipment. The safety function of the material handling controls is to prevent impacts to the glovebox during normal operations from loads handled either outside or inside the glovebox that could exceed the glovebox design basis. An additional safety function of material handling controls is to prevent potential overpressurization of the reusable plutonium oxide cans, due to radiolysis or oxidation of Pu(III) oxalate, and its subsequent impact to the glovebox. The safety function of the glovebox is to maintain confinement integrity for design basis impacts. The safety function of the material handling equipment is to prevent impacts to the glovebox, through the use of engineered equipment to reduce the likelihood of failures leading to glovebox breaches.

To reduce the risk to the facility worker during maintenance operations, facility worker controls based on training and procedures supplements the prevention features discussed above. The safety function of this principal SSC is to ensure that facility workers take proper actions prior to maintenance operations to limit radiological exposure.

The C2 confinement system passive boundary provides defense-in-depth protection for the site worker and the public.

5.5.2.3.6.3 C1 and/or C2 Areas

A load handling event within a C1 and/or C2 area involves an impact to one of the following:

- 3013 canister
- 3013 transport cask
- Fuel rod
- MOX fuel transport cask
- Waste container
- Transfer container
- Final C4 HEPA filter.

An event group is generated to represent the safety strategy utilized to reduce the risk associated with load handling events for each of the aforementioned events.

3013 Canister

Load handling events within the C2 area could involve 3013 canisters. The event identified with the bounding radiological consequences involves the drop of one 3013 canister onto another 3013 canister each containing unpolished PuO_2 in powder form.

To reduce the risk to the site worker, facility worker, and the environment associated with this load handling event group, a safety strategy utilizing mitigation features is adopted. The principal SSCs identified to implement this safety strategy are the 3013 canister and material handling controls. The safety function of the 3013 canister is to withstand the effects of the design basis drop without breaching. The safety function of the material handling controls is to ensure that the design basis lift height of the 3013 canister is not exceeded.

Due to the low unmitigated consequences of this event, no principal SSCs are required to protect the public. However, the 3013 canister and the C2 confinement system passive boundary provide defense-in-depth protection for the public. The C2 confinement system passive boundary also provides defense-in-depth for the site worker and the environment.

3013 Transport Cask

Load handling events within the C1 or C2 area could involve 3013 transport casks. The event identified with the bounding radiological consequences involves the drop of a 3013 transport cask containing unpolished PuO_2 in powder form.

To reduce the risk to the site worker, facility worker, and the environment associated with this load handling event group, a safety strategy utilizing mitigation features is adopted. The principal SSCs identified to implement this safety strategy are the 3013 transport cask and material handling controls. The safety function of the 3013 transport cask is to withstand the effects of design basis drops without release of radioactive material. The safety functions of the

material handling controls are to ensure that the design basis lift height of the 3013 transport cask is not exceeded.

Due to the low unmitigated consequences of this event, no principal SSCs are required to protect the public. However, the 3013 transport cask and the C2 confinement system passive boundary, provide defense-in-depth protection for the public. The C2 confinement system passive boundary also provides defense-in-depth for the site worker and the environment.

Fuel Rod

Load handling events within the C2 area could involve fuel rods. The event identified with the bounding radiological consequences involves the drop of a fuel assembly onto another fuel assembly each containing MOX (6%).

To reduce the risk to the facility worker associated with this load handling event group, mitigation features are utilized. The principal SSC identified to implement this safety strategy is facility worker action. The safety function of this principal SSC is to ensure that facility workers take proper actions to limit radiological exposure as the result of a load handling event.

Due to the low unmitigated consequences of this event, no principal SSCs are required to protect the public, site worker, or the environment. However, the C2 confinement passive boundary provides defense-in-depth protection for these potential receptors.

MOX Fuel Transport Cask

Load handling events within the C1 or C2 area could involve MOX fuel transport casks. The event identified with the bounding radiological consequences involves the drop of one MOX fuel transport cask containing up to three MOX fuel assemblies.

To reduce the risk to the facility worker and the environment associated with this load handling event group, a safety strategy utilizing mitigation features is adopted. The principal SSCs identified to implement this safety strategy are the MOX fuel transport cask and material handling controls. The safety function of the MOX fuel transport cask is to withstand the effects of design basis drops without release of radioactive material. The safety function of the material handling controls is to ensure that the design basis lift height of the MOX fuel transport cask is not exceeded.

Due to the low unmitigated consequences of this event, no principal SSCs are required to protect the site worker or the public. However, the MOX fuel transport cask also provides defense-in-depth protection for the public and site worker.

Waste Container

Load handling events within the C1, C2 or C3 area could involve waste containers (i.e., drums). Waste is packaged inside plastic (e.g., polyethylene) bags, then in drums that are sealed prior to transfer for material accounting, storage, and ultimate shipment. To reduce the risk to the facility worker associated with this load handling event group, a safety strategy utilizing mitigation features is adopted. The principal SSC identified to implement this safety strategy is facility

worker action. The safety function of this principal SSC is to ensure that facility workers take proper actions to limit radiological exposure as the result of a load handling event.

Due to the low unmitigated consequences of this event, no principal SSCs are required to protect the public, site worker, or the environment. However, for drops in C2 areas, the C2 confinement passive boundary provides defense-in-depth protection for these potential receptors.

Transfer Container

Load handling events within the C2 area may involve transfer containers. The event identified with the bounding radiological consequences involves the drop of a transfer container containing a HEPA filter with PuO_2 in powder form.

To reduce the risk to the site worker, facility worker, and the environment associated with this load handling event group, a safety strategy utilizing mitigation features is adopted. The principal SSCs identified to implement this safety strategy are the transfer container and material handling controls. The safety function of the transfer container is to withstand the effects of design basis drops without breaching. The safety function of the material handling controls is to ensure that the design basis lift height of the transfer container is not exceeded.

Due to the low unmitigated consequences of this event, no principal SSCs are required to protect the public. However, the C2 confinement passive boundary provides defense-in-depth protection to the public.

Final C4 HEPA Filter

Load handling events could result in damage to the final C4 HEPA filters. In this event, the final C4 HEPA filters are postulated to be impacted by a load that breaches the HEPA filter housing and allows material from the HEPA filters to pass directly to the stack. Even though these filters will contain very little material, principal SSCs are identified.

To reduce the risk to the facility worker, site worker, and the environment associated with this event group, prevention features are utilized. The principal SSC utilized to ensure that load handling events are prevented from impacting the final C4 HEPA filters is material handling controls. The safety function of the material handling controls is to ensure that load handling activities that could potentially lead to a breach in the final C4 HEPA filters do not occur. Administrative material handling controls will ensure that limited load handling activities take place in the vicinity of the C4 final HEPA filters to minimize the possibility of an impact to the filters. There are no cranes or other equipment in the vicinity of the final HEPA filters that could cause a load handling event. As required, necessary precautions will be taken to ensure that no release of radioactive material occurs during maintenance operations.

Due to the low unmitigated consequences of this event, no principal SSCs are required to protect the public. However, the principal SSCs applied to protect the facility worker, site worker, and the environment provide defense-in-depth protection for the public. The C2 confinement system passive boundary provides defense-in-depth protection for the public for load handling events that occur in the C2 area where the final C4 HEPA filters are located.

Table 5.5-16a. Summary of Principal SSCs for the Facility Worker Protection from Load Handling Events

Event Group	Principal SSC	Safety Function
AP Process Cells	Process Cells	Contain fluid leaks within process cells.
	Process Cell Entry Controls	Prevent the entry of personnel into process cells during normal operations. Ensure that workers do not receive a radiological exposure in excess of limits while performing maintenance in the AP process cells.
AP/MP C3 Glovebox Areas	Material Handling Controls	Prevent impacts to the glovebox during normal operations from loads outside or inside the glovebox that could exceed the glovebox design basis.
		Prevent potential overpressurization of the reusable plutonium oxide cans, due to radiolysis or oxidation of Pu(III) oxalate, and its subsequent impact to the glovebox.
	Material Handling Equipment	Prevent impacts to the glovebox through the use of engineered equipment.
	Glovebox	Maintain confinement integrity for design basis impacts
	Facility Worker Controls	Ensure that facility workers take proper actions prior to maintenance activities to limit radiological exposure.
C1 and/or C2 Areas - 3013 Canister	3013 Canister	Withstand the effects of design basis drops without breaching
	Material Handling Controls	Ensure that the design basis lift height of the 3013 canisters is not exceeded.
C1 and/or C2 Areas - 3013 Transport Cask	3013 Transport Cask	Withstand the effects of design basis drops without release of radioactive material
	Material Handling Controls	Ensure that the design basis lift height of the 3013 transport cask is not exceeded.
C1 and/or C2 Areas - Fuel Rod	Facility Worker Action	Ensure that facility workers take proper actions to limit radiological exposure.

Table 5.5-16a. Summary of Principal SSCs for the Facility Worker Protection from Load Handling Events (continued)

Event Group	Principal SSC	Safety Function
C1 and/or C2 Areas - MOX Fuel Transport Cask	MOX Fuel Transport Cask	Withstand the effects of design basis drops without release of radioactive material
	Material Handling Controls	Ensure that the design basis lift height of the MOX fuel transport cask is not exceeded.
C1 and/or C2 Areas - Waste Container	Facility Worker Action	Ensure that facility workers take proper actions to limit radiological exposure.
C1 and/or C2 Areas - Transfer Container	Transfer Container	Withstand the effects of design basis drops without breaching
	Material Handling Controls	Ensure that the design basis lift height of the transfer container is not exceeded.
C1 and/or C2 Areas - Final C4 HEPA Filter	Material Handling Controls	Prevent load handling activities that could potentially lead to a breach in the final C4 HEPA filters.
C4 Confinement	C4 Confinement System	Maintain a negative glovebox pressure differential between the glovebox and the interfacing systems. Ensure C4 exhaust is effectively filtered.
Outside MOX Fuel Fabrication Building	Waste Transfer Line	Ensure that waste transfer line is protected from activities taking place outside the MOX Fuel Fabrication Building.
Facilitywide	MOX Fuel Fabrication Building Structure	Withstand the effects of load drops that could potentially impact radiological material.
	Material Handling Controls	Prevent load handling events that could breach primary confinements.

Table 5.5-16b. Summary of Principal SSCs for Environmental Protection from Load Handling Events

Event Group	Principal SSC	Safety Function
AP Process Cells	Process Cell Ventilation System Passive Boundary	Provide filtration to limit the dispersion of radioactive material
AP/MP C3 Glovebox Areas	Material Handling Controls	Prevent impacts to the glovebox during normal operations from loads outside or inside the glovebox that could exceed the glovebox design basis.
		Prevent potential overpressurization of the reusable plutonium oxide cans, due to radiolysis or oxidation of Pu(III) oxalate, and its subsequent impact to the glovebox.
	Material Handling Equipment	Prevent impacts to the glovebox through the use of engineered equipment.
	Glovebox	Maintain confinement integrity for design basis impacts
C1 and/or C2 Areas - 3013 Canister	3013 Canister	Withstand the effects of design basis drops without breaching
	Material Handling Controls	Ensure that the design basis lift height of the 3013 canisters is not exceeded.
C1 and/or C2 Areas - 3013 Transport Cask	3013 Transport Cask	Withstand the effects of design basis drops without release of radioactive material
	Material Handling Controls	Ensure that the design basis lift height of the 3013 transport cask is not exceeded.
C1 and/or C2 Areas - Fuel Rod	None Required	N/A
C1 and/or C2 Areas - MOX Fuel Transport Cask	MOX Fuel Transport Cask	Withstand the effects of design basis drops without release of radioactive material
	Material Handling Controls	Ensure that the design basis lift height of the MOX fuel transport cask is not exceeded.
C1 and/or C2 Areas - Waste Container	None Required	N/A

Table 5.5-16b. Summary of Principal SSCs for Environmental Protection from Load Handling Events (continued)

Event Group	Principal SSC	Safety Function
C1 and/or C2 Areas - Transfer Container	Transfer Container	Withstand the effects of design basis drops without breaching
	Material Handling Controls	Ensure that the design basis lift height of the transfer container is not exceeded.
C1 and/or C2 Areas - Final C4 HEPA Filter	Material Handling Controls	Prevent load handling activities that could potentially lead to a breach in the final C4 HEPA filters.
C4 Confinement	C4 Confinement System	Ensure C4 exhaust is effectively filtered. Maintain a negative glovebox pressure differential between the glovebox and the interfacing systems.
Outside MOX Fuel Fabrication Building	Waste Transfer Line	Ensure that waste transfer line is protected from activities taking place outside the MOX Fuel Fabrication Building.
Facilitywide	MOX Fuel Fabrication Building Structure	Withstand the effects of load drops that could potentially impact radiological material.
	Material Handling Controls	Prevent load handling events that could breach primary confinements.

In addition, chemical safety controls will ensure the chemicals used in the MFFF laboratories are properly controlled; assuring incompatible chemicals are separated/segregated. To establish these incompatibilities for the laboratory and reagents in general, a complete chemical interaction evaluation will be provided as part of the ISA.

As an additional protection feature, the chemicals in the reagents building are physically separated by type (for example, to ensure that oxidizers are not mixed with reducing compounds). Similarly, the nitric oxide (NOx), solvent (diluent with tributylphosphate), and hydroxylamine nitrate (HAN) are prepared in separate rooms to ensure segregation from incompatible chemicals. These measures, in addition to providing control of the chemical makeup of the reagents prior to piping into the BAP, also provide non-safety protection against chemical events in the BRP. Chapter 8 provides more details related to the chemical safety of the MFFF.

5.6.2.2 Combustible Loading Controls

The principal SSC, combustible loading controls, is used to describe the control of combustible and transient combustible loads by design and the control of transient combustible loads during operations. The design limits the combustible loads inherent in the fixtures and equipment within a fire area. The safety function of these administrative controls is to limit the amount of transient combustible material within a fire area to allowable quantities during operations to ensure that the design basis fire is not exceeded. The administrative controls are enhanced by training, posting, routine house-keeping and periodic surveillance. Fire models will be performed as part of the ISA to demonstrate that combustible loading controls are effective. Refer to Section 7.1 for details about the Fire Protection Program.

5.6.2.3 Material Handling Controls

Material handling controls require loads to be handled using safe practices such that the resulting impacts are within the design basis of the container being handled or that impacts do not damage principal SSCs such that they would be unable to perform their safety functions. The design basis for containers (i.e., 3013 canister, 3013 transport cask, MOX fuel transport cask, waste containers) being lifted is discussed in Section 11.4.11. The safety function of the material handling controls is to ensure that primary confinement containers are handled properly such that, if dropped, there would be no release of radioactive material that could cause consequences that exceed 10 CFR §70.61 or that a drop of a load would not damage a principal SSC such that it would not be able to perform its safety function (such as a breach of a primary confinement that could cause consequences that exceed 10 CFR §70.61).

Loads are handled by qualified personnel, following an approved procedure controlling material to be moved, equipment (including specialized lifting fixtures), training, and precautions and limitations for the movement as applicable. Materials that will be handled by operators as part of the normal production process (pre-engineered production lifts) will have the same requirements as any other load. In addition to trained operators and proper procedures, material handling controls will also ensure the proper equipment is used having a sufficient capacity for the type and weight of load being lifted. Controls associated with the safety function of the principal SSC cranes include required testing and surveillance.

Other material handling controls are provided to prevent a postulated overpressurization of the reusable cans containing plutonium dioxide powder causing impact of the can lids with the glovebox. Potential overpressurization of the cans are postulated to occur due to radiolysis (see Section 5.5.2.4.1.3) or oxidation of Pu(III) oxalate. To prevent overpressurization of the cans due to radiolysis, material handling controls are employed. These controls may include control of moisture content of the plutonium dioxide, residence time of the canned material, and/or the design pressure of the reusable can. Overpressurization of the cans from the oxidation of the Pu(III) oxalate may be prevented through one of the following material handling controls: (1) controls on furnace parameters, such as furnace residence time and minimum temperature, to ensure complete oxidation of the plutonium oxalate, or (2) measurement of the Pu(III) content in the plutonium dioxide powder. The associated design basis for this principal SSC is to ensure that the reusable can is designed to maximum internal pressure plus 10%. The specific IROFS required for material handling controls in order to prevent overpressurization of the reusable cans will be identified as part of the ISA.

5.6.2.4 Material Maintenance and Surveillance Programs

The primary means of preventing corrosion-related failures of principal SSCs is through the use of compatible materials within the MFFF fluid systems and to provide separation and segregation of incompatible chemicals. The safety function of the material maintenance and surveillance programs is to supplement these corrosion prevention measures by establishing programs to detect and limit the damage resulting from corrosion (principally to reduce failures associated with corrosion occurring to laboratory and AP gloveboxes containing corrosive chemicals, confinement ducting, and pneumatic transfer lines).

Material maintenance and surveillance programs consist of periodic system-level walkdowns, as well as non-destructive testing programs that can identify corrosion problems within the facility prior to catastrophic failures occurring, and provide a means of taking corrective actions to prevent such failures. These programs are not required to prevent corrosion which could result in small leaks. The frequency of surveillance and maintenance programs will be established based on industry experience.

5.6.2.5 Process Cell Entry Controls

The safety function of the process cell entry controls is to prevent the entry of personnel into process cells during normal operations and to ensure that workers do not receive a dose in excess of limits while performing maintenance in the process cells. The health physics program for the facility, described in chapter 9, includes process cell access controls during normal operations in order to limit radiation exposures. Work within the process area is performed via radiation work permits that are authorized by radiation protection staff. Work activities within radiation areas are monitored by health physics staff and radiation monitors. Process cells and gloveboxes are sealed during normal operations to avoid personnel exposures to airborne plutonium particulate contamination. Radiation monitors are positioned throughout the facility for fast response to confinement failures. Access to such sealed areas is strictly controlled under the health physics program, which also precludes exposures during accident conditions.

Table 5.6-1. MFFF Principal SSCs (continued)

Principal SSC	Safety Function	SA Design Basis Reference
Material Handling Controls*	Prevent impacts to the glovebox during normal operations from loads outside or inside the glovebox that could exceed the glovebox design basis	5.6.2.3
	Prevent potential overpressurization of the reusable plutonium oxide cans, due to radiolysis or oxidation of Pu (III) oxalate, and its subsequent impact to the glovebox	
	Prevent load handling events that could breach primary confinements	
Material Handling Equipment	Limit damage to fuel rods/assemblies during handling operations	11.7.7
	Prevent impacts to the glovebox through the use of engineered equipment	
Material Maintenance and Surveillance Programs*	Detect and limit the damage resulting from corrosion	5.6.2.4
MFFF Tornado Dampers	Protect MFFF ventilation systems from differential pressure effects of the tornado	11.4.11
Missile Barriers	Protect MOX Fuel Fabrication Building and Emergency Generator Building internal SSCs from damage caused by tornado- or wind-driven missiles	11.1.7
MOX Fuel Fabrication Building Structure (including vent stack)	Maintain structural integrity and prevent damage to internal SSCs from external fires, external explosions, earthquakes, extreme winds, tornadoes, missiles, rain, and snow and ice loadings	11.1.7
	Withstand the effects of load drops that could potentially impact radiological material	
MOX Fuel Transport Cask	Withstand the design basis fire without breaching	11.4.11
	Withstand the effects of design basis drops without release of radioactive material	
Offgas Treatment System	Provide an exhaust path for the removal of gases in process vessels	11.4.11

Table 5.6-1. MFFF Principal SSCs (continued)

Principal SSC	Safety Function	SA Design Basis Reference
Pressure Vessel Controls*	Ensure that primary confinements are protected from the impact of pressure vessel failures (bulk gas, breathing air, service air, and instrument air systems)	11.9.5
Process Cells	Contain fluid leaks within process cells	11.4.11
Process Cell Entry Controls*	Prevent the entry of personnel into process cells during normal operations	5.6.2.5
	Ensure that workers do not receive a radiological or chemical exposure in excess of limits while performing maintenance in the AP process cells	
Process Cell Fire Prevention Features	Ensure that fires in the process cells are highly unlikely	7.5.3
Process Cell Ventilation System Passive Boundary	Provide filtration to limit the dispersion of radioactive material	11.4.11
Process Safety Control Subsystem		System design basis provided in 11.6.7. As necessary, basis for parameters provided as shown
	Prevent the formation of an explosive mixture of hydrogen within the MFFF facility associated with the use of the hydrogen-argon gas	8.5
	Ensure isolation of sintering furnace humidifier water flow on high water level	11.4.11 (See Sintering Furnace)
	Ensure the temperature of solutions containing HAN is limited to temperatures within the safety limits	8.5
	Control the flowrate into the oxidation column	8.5
	Ensure the temperature of solutions containing organic is limited to temperatures within safety limits	8.5
	Limit the residence time of organics in process vessels containing oxidizing agents and potentially exposed to high temperatures and in radiation fields	8.5

Table 5.6-1. MFFF Principal SSCs (continued)

Principal SSC	Safety Function	SA Design Basis Reference
Process Safety Control Subsystem (continued)	Ensure the temperature of solutions potentially containing hydrazoic acid is limited to prevent an explosive concentration of hydrazoic acid from developing	8.5
	Limit and control conditions under which dry-out can occur	8.5
	Ensure the temperature of solutions potentially containing metal azides is insufficient to overcome the activation energy needed to initiate the energetic decomposition of the azide	8.5
	Ensure the normality of the nitric acid is sufficiently high to ensure that the offgas is not flammable and to limit excessive hydrogen production	8.5
	Warn operators of glovebox pressure discrepancies prior to exceeding differential pressure limits	11.4.11
	Shut down process equipment prior to exceeding temperature safety limits	11.4.11
	Ensure the temperature of solutions containing solvents is limited to temperatures within safety limits	8.5
	Ensure the flow rate of nitrogen dioxide/ dinitrogen tetroxide is limited to the oxidation column of the purification cycle	8.5
	Maintain sintering furnace within design limits	11.4.11
Seismic Monitoring System and Associated Seismic Isolation Valves	Prevent fire and criticality as a result of an uncontrolled release of hazardous material and water within the MFFF Building in the event of an earthquake	11.6.7 – for system 11.8.7 – for valves
Sintering Furnace	Provide a primary confinement boundary against leaks into C3 areas	11.4.11
Supply Air System	Provide unconditioned emergency cooling air to the storage vault and designated electrical rooms	11.4.11

Table 5.6-1. MFFF Principal SSCs (continued)

Principal SSC	Safety Function	SA Design Basis Reference
Transfer Container	Withstand the effects of design basis drops without breaching	11.4.11
Waste Containers	Ensure that hydrogen buildup in excess of limits does not occur while providing appropriate confinement of radioactive materials	11.4.11
Waste Transfer Line	Ensure that the waste transfer line is protected from activities taking place outside the MOX Fuel Fabrication Building	10.5
	Prevent damage to the line from external fires, explosions, earthquakes, extreme winds, tornadoes, missiles, rain, and snow and ice loadings	10.5

* Administrative control

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