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PFP Safety Equipment List, WHC-SD-CP-TI-108, Rev. 14, K6058		ECN No. 617463

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1. ECN No 617463

Proj.
ECN

2. ECN Category (mark one) Supplemental ☐ Direct Revision ☒ Change ECN ☐ Temporary ☐ Standby ☐ Supersedure ☐ Cancel/Void ☐	3. Originator's Name, Organization, MSIN, and Telephone No. GREG BERQUIST, PFP PROCESS ENGINEERING, T5-55, 373-2709		4. Date January 6, 1995
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11a. Modification Work [] Yes (fill out Blk. 11b) [X] No (NA Blks. 11b, 11c, 11d)	11b. Work Package No. N/A	11c. Modification Work Complete N/A _____ Cog. Engineer Signature & Date	11d. Restored to Original Condition (Temp. or Standby ECN only) N/A _____ Cog. Engineer Signature & Date
12. Description of Change Direct Revision of the Plutonium Finishing Plant Safety Systems and Equipment List.			
13a. Justification (mark one) Criteria Change ☒ Design Improvement ☐ Environmental ☐ As-Found ☐ Facilitate Const. ☐ Const. Error/Omission ☐ Design Error/Omission ☐			
13b. Justification Details Approval of the new PFP Operational Safety Requirements and FSAR Accident Analyses.			
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UNREVIEWED SAFETY QUESTION SAFETY REVIEW FORM

(Per WHC-IP-0842, 15.9)

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REFERENCE DOCUMENT(S):

ECN No. 617463 page 3 of 3

PCA No.

Work Pkg No.

Other (Specify)

TITLE: PFP Safety Equipment List, WHC-SD-CP-TI-108, Rev. 14

Does the PROPOSED CHANGE:

A. Represent a change to the facility as described in the AUTHORIZATION BASIS documentation?

☐ N/A ☒ No ☐ Yes/Maybe

Basis: Revision 14 to the Safety Equipment List implements recent changes made to Table 4.4.2 in the FSAR (WHC-SD-CP-SAR-021) and accident analysis in chapter 9 of the same document.

B. Represent a change to procedures as described in the AUTHORIZATION BASIS?

☒ N/A ☐ No ☐ Yes/Maybe

Basis: Procedures for maintenance of Safety Equipment List are not described in the PFP FSAR or Authorization Basis documents.

C. Represent a test or experiment not described in the AUTHORIZATION BASIS documentation?

☒ N/A ☐ No ☐ Yes/Maybe

Basis: No tests or experiments are involved.

D. Does the change impact:

• Implemented OSRs or IOSRs? ☐ N/A ☒ No ☐ Yes/Maybe• Approved IOSR Compliance Implementation Plans? ☐ N/A ☒ No ☐ Yes/Maybe

Basis:

Based on the above, a Safety Evaluation ☐ DOES ☒ DOES NOT
need to be performed for this change

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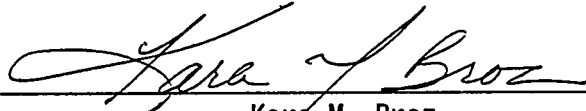
Document Title: Plutonium Finishing Plant Safety Systems and Equipment list

Release Date: 1/25/95

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January 25, 1995

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2. Title Plutonium Finishing Plant Safety Systems and Equipment List	3. Number WHC-SD-CP-TI-108	4. Rev No. 14
5. Key Words Safety Class, PFP, Safety Equipment List, Safety Systems, SEL, FSAR	6. Author Name: Gregory G. Bergquist <i>Gregory G. Bergquist</i> Signature Organization/Charge Code 15530/K6058	
7. Abstract The Safety Equipment List (SEL) supports the Plutonium Finishing Plant Final Safety Analysis Report (FSAR), WHC-SD-CP-SAR-021 and the Plutonium Finishing Plant Operational Safety Requirements (OSRs), WHC-SD-CP-OSR-010. The SEL is a breakdown and classification of all Safety Class 1, 2, and 3 equipment, components, or systems at the Plutonium Finishing Plant complex.		

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SAFETY SYSTEM/EQUIPMENT LIST

1.0 Purpose

The purpose of this document is to provide a comprehensive list of safety systems and equipment that require particular care, use and maintenance attention to assure safe operation of the Plutonium Finishing Plant (PFP).

2.0 Application

The Safety Equipment List (SEL) supports the PFP Final Safety Analysis Report (FSAR), WHC-SD-CP-SAR-021, and considers accident analyses presented in chapter 9 of the FSAR. The SEL also implements the PFP Operational Safety Requirements (OSRs), WHC-SD-CP-OSR-010. The SEL is consistent with the DOE 6430.1A, "General Design Criteria" and with Westinghouse Hanford Company Management Requirements and Procedures document WHC-CM-1-3, Section MRP 5.46, titled "Safety Classification of Systems, Components, and Structures."

The SEL is intended to be used in conjunction with the Job Control System (JCS) as described in WHC-CM-5-8, Plutonium Finishing Plant Administration, Section 6.9. It is meant for use during the preparation of PFP engineering, operating, maintenance, safety, and environmental documentation to assist in assigning the appropriate approval designator for document review.

3.0 Format

The SEL lists all of the systems and components which are considered Safety Class 1 or 2 in tables by system. All Safety Class 3 items are listed in a single table.

The proper functioning of a safety system or of safety equipment may depend on ancillary equipment necessary to service or support the basic equipment function. Examples of ancillary equipment include electrical breakers, switches, interlocks, relays, pressure/temperature transducers, transmitters, gauges, valves, A/D converters, etc. Certain items of a system or equipment may not reflect function and can be placed in a lower safety class. The Cognizant Engineer may assign a lower class identification based upon the particular component impact on the system or equipment performance.

If any doubt about the classification of components within a described system or the need to add, delete, and adjust the SEL arises, contact the facility cognizant engineer or the SEL coordinator (Greg Bergquist, 373-2709) for clarification and assistance.

4.0 Derivation

The SEL was derived from the various safety documentation supporting PFP (FSAR, System Description Documents [SDDs], and the Authorization Basis) and from the experience and judgement of experienced operations, engineering, and

safety staff personnel who operate and support the plant. Safety Class 1 and 2 systems are identified in the FSAR for PFP. The component identifications, descriptions, and locations were identified in the MCI and SDDs.

5.0 Changes

This revision incorporates significant changes in the listing of Safety Class 1 and 2 systems. The tables are in a simplified format which contain the Safety Class 1 and 2 components of these systems. A number of components which were previously identified as candidates for downgrading to a lower safety class have been downgraded, due to implementation of the new PFP OSRs.

6.0 Safety Class Tables

Table 1.1: Plutonium Building Structural Features

System:	Plutonium Building Structural Features	Justification:
		Provides the final barrier to the environment. Loss of barrier could result in release of dispersible material during emergency conditions. WHC-SD-CP-SDD-007

PFP SAFETY CLASS 1 SYSTEMS AND RELATED EQUIPMENT					
KEY:S-SEISMIC/STRUCTURAL C-CRITICALITY E-ENVIRONMENTAL I-INDUSTRIAL SAFETY F-FIRE X-INTERNAL COMPARTMENTALIZATION R-RADIATION PROTECTION O-OSD Z-HVAC BOUNDARY					
Component ID(s)	Description/Function	LOCATION/ ROOM	SYSTEM CODE(S)	PURPOSE CODE(S)	
ALL BUILDINGS 234-5Z, 236-Z, 2736-ZB, 2736-Z, 242-Z, 232-Z					
N/A	Building Construction Material	N/A	21C	F	
N/A	Columns	N/A	21C	S	
N/A	Doors- Exterior	N/A	21C	EZ	
N/A	Concrete Floors Above Grade	N/A	21C	SXF	
N/A	Footings/Foundations	N/A	21C	S	
N/A	Framing - Exterior Wall	N/A	21C	E	
N/A	Framing - Floor	N/A	21C	S	
N/A	Framing - Roof	N/A	21C	E	

PFP SAFETY CLASS 1 SYSTEMS AND RELATED EQUIPMENT				
KEY:S-SEISMIC/STRUCTURAL C-CRITICALITY E-ENVIRONMENTAL I-INDUSTRIAL SAFETY F-FIRE X-INTERNAL COMPARTMENTALIZATION R-RADIATION PROTECTION O-OSD Z-HVAC BOUNDARY				
Component ID(s)	Description/Function	LOCATION/ ROOM	SYSTEM CODE(s)	PURPOSE CODE(S)
234-5Z BUILDING				
N/A	Exterior Walls - Except 192 A, B, and C Vaults and Office Annex	1st Floor	21C	EZ
N/A	Concrete Exterior Wall - 192 A, B, and C Vaults	1st Floor	21C	EZCR
N/A	Interior Wall - Column Line C Concrete Wall (C4 to C21)	1st Floor	21C	SYZF
N/A	Interior Wall - Column Line E Concrete Wall E4 Thru E21	1st Floor	21C	SX
N/A	Interior Wall - Column Line 4 Concrete Wall (C4 to E4)	1st Floor	21C	SX
N/A	Concrete Walls - Stair 1	1st Floor	21C	SIF
N/A	Concrete Walls - Stair 2	1st Floor	21C	SIF
N/A	Concrete Walls - Elevator Shaft	1st Floor	21C	SFX
N/A	Interior Walls and Ceiling - Room 166	1st Floor	21C	SFRE
N/A	Interior Walls and Ceiling - Rooms 173, 174, 175	1st Floor	21C	CFRX
N/A	Interior Walls - Rooms 192A, B and C	1st Floor	21C	SCFXR
N/A	Interior Walls and Ceiling - Room 225	1st Floor	21C	SCFXR
N/A	Interior East, West, and North Walls - Room 227	1st Floor	21C	FX
N/A	Interior West Wall - Rooms 234 and 234A	1st Floor	21C	X
N/A	Interior North Wall - Room 236	1st Floor	21C	SXZ
N/A	Interior Wall - Column Line G, 19 to 21 (Wall Separating the Office Annex From The Main Building)	1st Floor	21C	E
N/A	Exterior Walls - Except Room 192A Vault	Duct Level	21C	EZ
N/A	Exterior Concrete Walls - Room 192A	Duct Level	21C	ECS
N/A	Interior Concrete Walls - Room 192A	Duct Level	21C	XCS

PFP SAFETY CLASS 1 SYSTEMS AND RELATED EQUIPMENT				
KEY:S-SEISMIC/STRUCTURAL C-CRITICALITY E-ENVIRONMENTAL I-INDUSTRIAL SAFETY F-FIRE X-INTERNAL COMPARTMENTALIZATION R-RADIATION PROTECTION O-OSD Z-HVAC BOUNDARY				
Component ID(s)	Description/Function	LOCATION/ ROOM	SYSTEM CODE(s)	PURPOSE CODE(S)
N/A	Interior Concrete Walls - Stair 1	Duct Level	21C	SIF
N/A	Interior Concrete Walls - Stair 2	Duct Level	21C	SIF
N/A	Interior Concrete Walls - Elevator Shaft	Duct Level	21C	SF
N/A	Interior Wall - Column C4 to C21	Duct Level	21C	SXZ
N/A	Interior Wall - Column D8 to D17.5	Duct Level	21C	S
N/A	Interior Wall - Column E4 to E21	Duct Level	21C	S
N/A	Interior Wall - East Wall of Room 263 (C4 to E4)	Duct Level	21C	SX
N/A	Interior Wall - North Wall of Room 229	Mezzanine Level	21C	SX
N/A	Exterior Wall - Column Line 23	Mezzanine Level	21C	EF
N/A	Interior Wall - Column C12 to C19	Mezzanine Level	21C	SXZ
N/A	Interior Wall - Column D12 to D17.5	Mezzanine Level	21C	SX
N/A	Interior Wall - Column E12 to E21.5	Mezzanine Level	21C	X
N/A	Exterior Walls	2nd Floor	21C	E
N/A	Concrete Walls - Stair 1	2nd Floor	21C	IF
N/A	Concrete Walls - Stair 2	2nd Floor	21C	SIF
N/A	Concrete Walls - Elevator	2nd Floor	21C	F
N/A	Interior Walls - Rooms 309, 310, 311, 312, 313, 314, 315, 316 and 318	2nd Floor	21C	XFZ
N/A	Roof Line Wall - A12 to D12	Roof	21C	EZ
N/A	Roof Line Wall - D7 to D12	Roof	21C	EZ
N/A	Roof Line Wall - D7 to G7	Roof	21C	EZ
N/A	Roof Line Wall - F19 to G19	Roof	21C	EZ

PFP SAFETY CLASS 1 SYSTEMS AND RELATED EQUIPMENT

KEY:S-SEISMIC/STRUCTURAL C-CRITICALITY E-ENVIRONMENTAL
I-INDUSTRIAL SAFETY F-FIRE X-INTERNAL COMPARTMENTALIZATION
R-RADIATION PROTECTION O-OSD Z-HVAC BOUNDARY

Component ID(s)	Description/Function	LOCATION/ ROOM	SYSTEM CODE(s)	PURPOSE CODE(S)
N/A	Roof Line Wall - F19 to F23	Roof	21C	EZ
N/A	Stair 1 Concrete Walls & Roof	Roof	21C	S
N/A	All Concrete Walls	Tunnels/Foundation	21C	Z
N/A	All Footings	Tunnels/Foundation	21C	S
236-Z BUILDING				
N/A	Exterior Walls	1st Floor	21C	EFZ
N/A	Stair 1	1st Floor	21C	SFX
N/A	Stair 2	1st Floor	21C	SFXI
N/A	Elevator Shaft Walls	1st Floor	21C	SFX
N/A	Interior Wall - East Canyon Wall	1st Floor	21C	SXR
N/A	Interior Wall - West Canyon Wall	1st Floor	21C	SXR
N/A	Interior wall - Corridor 10 South Wall to Column 3	1st Floor	21C	SXR
N/A	Interior Wall - Corridor 14 East Wall	1st Floor	21C	SX
N/A	Interior Wall - Room 16 and 17 North Wall	1st Floor	21C	SX
N/A	Interior wall - Room 19 North, West, and South Walls	1st Floor	21C	SX
N/A	Exterior Walls	2nd Floor	21C	ES
N/A	Stair 1	2nd Floor	21C	SFX
N/A	Stair 2	2nd Floor	21C	SFXI
N/A	Elevator Shaft Walls	2nd Floor	21C	SFX
N/A	Interior Wall - Canyon Walls	2nd Floor	21C	RXS

PPF SAFETY CLASS 1 SYSTEMS AND RELATED EQUIPMENT

KEY:S-SEISMIC/STRUCTURAL C-CRITICALITY E-ENVIRONMENTAL
I-INDUSTRIAL SAFETY F-FIRE X-INTERNAL COMPARTMENTALIZATION
R-RADIATION PROTECTION O-OSD Z-HVAC BOUNDARY

Component ID(s)	Description/Function	LOCATION/ ROOM	SYSTEM CODE(s)	PURPOSE CODE(S)
N/A	Interior Wall - East Wall of Corridor 25	2nd Floor	21C	SX
N/A	Interior Wall - North Wall of Room 26	2nd Floor	21C	S
N/A	Elevator - Southwest Corner of Room 27 to North Wall of Room 26	2nd Floor	21C	S
N/A	Interior Wall - North and South Wall of Room 27	2nd Floor	21C	S
N/A	Exterior Walls	3rd Floor	21C	ES
N/A	Stair 1 - Concrete Walls	3rd Floor	21C	SFX
N/A	Stair 2 - Concrete Walls	3rd Floor	21C	SIFE
N/A	Elevator Shaft Walls	3rd Floor	21C	SFX
N/A	Interior Wall - Canyon Concrete Walls	3rd Floor	21C	SXR
N/A	Concrete Duct Walls	3rd Floor	21C	SFX
N/A	Corridor 33 East Wall	3rd Floor	21C	S
N/A	Interior Wall - West Wall of Room 35 and West Doors of Room 34	3rd Floor	21C	S
N/A	Wall Between Room 36 & 38	3rd Floor	21C	S
N/A	Exterior Walls	4th Floor	21C	ES
N/A	Concrete Walls - Stair 1	4th Floor	21C	SFX
N/A	Concrete Walls - Stair 2	4th Floor	21C	SIFE
N/A	Concrete Walls - Elevator Shaft	4th Floor	21C	SFX
N/A	Interior Wall - North and East Walls of Room 42	4th Floor	21C	SX
N/A	Interior Wall - East Wall of Corridor 47 and Room 43	4th Floor	21C	S
N/A	Roof	4th Floor	21C	EZ
N/A	Exterior Walls	5th Floor	21C	ES

PPF SAFETY CLASS 1 SYSTEMS AND RELATED EQUIPMENT

KEY: S-SEISMIC/STRUCTURAL C-CRITICALITY E-ENVIRONMENTAL
I-INDUSTRIAL SAFETY F-FIRE X-INTERNAL COMPARTMENTALIZATION
R-RADIATION PROTECTION O-OSD Z-HVAC BOUNDARY

Component ID(s)	Description/Function	LOCATION/ ROOM	SYSTEM CODE(s)	PURPOSE CODE(S)
N/A	Concrete Walls - Stair 2	5th Floor	21C	SXFI
N/A	Exterior Walls	6th Floor	21C	ES
N/A	Concrete Walls - Stair 2	6th Floor	21C	EFXI
N/A	Roof	6th Floor	21C	EZ
2736-ZB BUILDING				
N/A	Exterior Walls	1st Floor	21C	EZSF
N/A	Interior Wall - East Wall of Corridor 625	1st Floor	21C	SXF
N/A	Interior Wall - East and South Wall of Room 636	1st Floor	21C	SFX
N/A	Interior wall - East, West, and South Wall of Room 637	1st Floor	21C	SFX
N/A	All Other Interior Concrete Walls	1st Floor	21C	SF
N/A	Roof	1st Floor	21C	EZS
2736-Z BUILDING				
N/A	Exterior Walls	N/A	21C	EZCRS
N/A	Interior Walls Between Vault 1 & 2, and 3 & 4	N/A	21C	CXRSF
N/A	Concrete Walls Between Corridor and Vaults	N/A	21C	CXRSF
N/A	Roof	N/A	21C	EZCS
242-Z BUILDING				
N/A	North Interior Wall - Column J1 to J3	N/A	21C	SX
N/A	South Interior Wall - Column 1-3 North Wall of Corridor 10	N/A	21C	SX
N/A	East Exterior Wall - Column J1 to Door 11 at Column 1	N/A	21C	ES

PFP SAFETY CLASS 1 SYSTEMS AND RELATED EQUIPMENT					
KEY:S-SEISMIC/STRUCTURAL C-CRITICALITY E-ENVIRONMENTAL I-INDUSTRIAL SAFETY F-FIRE X-INTERNAL COMPARTMENTALIZATION R-RADIATION PROTECTION O-OSD Z-HVAC BOUNDARY					
Component ID(s)	Description/Function	LOCATION/ ROOM	SYSTEM CODE(s)	PURPOSE CODE(S)	
N/A	West Exterior Wall - Column J4 South to Corridor 10 North Wall	N/A	21C	ES	
N/A	West Interior Wall - Column J3 South to Door 13	N/A	21C	ES	
N/A	Roof	N/A	21C	EZS	
291-Z1 STACK					
N/A	Foundation and Stack	N/A	21C	S	
232-Z BUILDING					
N/A	Exterior Walls	1st Floor	21C	ESZ	
N/A	Interior Walls Between Filter Room and Process Room	1st Floor	21C	SX	
N/A	Interior Walls Between Process Room and Change Room	1st Floor	21C	SX	
N/A	Interior Walls Between Chemical Mix Room, Electrical and Change Rooms	1st Floor	21C	S	
N/A	Roof	1st Floor	21C	EZ	
N/A	Exterior Walls - HVAC Includes Duct and Fan Room	2nd Floor	21C	X	

Table 1.2: HEPA Filters, Secondary and Final Stage

System: HEPA Filters, Secondary and Final Stage	Justification: The confinement safety boundary is established to ensure that air from potentially contaminated and known contaminated areas within the PFP complex is filtered by nuclear-grade HEPA filters before discharge to the environment. These HEPA filters maintain a protection envelope for off-site releases of radioactive materials from the PFP complex. WHC-SD-CP-SDD-005
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PFP SAFETY CLASS 1 SYSTEMS AND RELATED EQUIPMENT				
KEY: S-SEISMIC C-CRITICALITY E-ENVIRONMENTAL I-INDUSTRIAL SAFETY F-FIRE R-RADIATION PROTECTION O-OSD				
Component ID(s)	Description/Function	LOCATION/ ROOM	SYSTEM CODE(s)	PURPOSE CODE(S)
F-36	Secondary E-4 HEPA Filters for Rm 19 and 27	236-Z/36	25A	RE
F-A1, F-A2, F-A3, F-A4, F-A5, F-A6, F-A7, F-A8, F-A9, F-A10, F-A11, F-A12	Final E-3 HEPA Filters in Bank A	236-Z/26	25A	RE
F-B1, F-B2, F-B3, F-B4, F-B5, F-B6, F-B7, F-B8, F-B9, F-B10, F-B11, F-B12	Final E-4 HEPA Filters in Bank B	236-Z/26	25A	RE
F-C1, F-C2, F-C3, F-C4, F-C5, F-C6, F-C7, F-C8, F-C9, F-C10, F-C11, F-C12	Final E-4 HEPA Filters in Bank C	236-Z/26	25A	RE
F-D1, F-D2, F-D3, F-D4, F-D5, F-D6, F-D7, F-D8, F-D9, F-D10, F-D11, F-D12	Final E-3 HEPA Filters in Bank D	236-Z/26	25A	RE
FB-10E, FB-10W, FB-20E, FB-20W	Secondary E-4 HEPA Filters for PRF Process Cell	236-Z/ Corridor 10 and 20	25A	RE
FB-50	Secondary E-4 HEPA Filters for PRF Column Hoods, Miscellaneous Treatment Gloveboxes, and Room 43 Gloveboxes	236-Z/50	25A	RE

PFP SAFETY CLASS 1 SYSTEMS AND RELATED EQUIPMENT

KEY: S-SEISMIC C-CRITICALITY E-ENVIRONMENTAL
I-INDUSTRIAL SAFETY F-FIRE
R-RADIATION PROTECTION O-OSD

Component ID(s)	Description/Function	LOCATION/ ROOM	SYSTEM CODE(s)	PURPOSE CODE(S)
F-E1-25D, F-E3-25D	Secondary E-3/E-4 HEPA Filters for 241-Z and 241-ZA	241-Z	25D	RE
F-W2-25D, F-W4-25D	Final E-3/E-4 HEPA Filters for 241-Z and 241-ZA	241-Z	25D	RE
F-NP, F-SP	Secondary E-4 HEPA Filters for Air Sampling Vacuum in 291-Z	291-Z/509	25A	RE
F-NS, F-SS	Final E-4 HEPA Filters for Air Sampling Vacuum in 291-Z	291-Z/509	25A	RE
EF-C5	Secondary E-4 HEPA Filter for Room 221C	234-5Z/263	25A	RE
EF-D8	Secondary E-4 HEPA Filter for Room 221D	234-5Z/263	25A	RE
EF-E5	Secondary E-4 HEPA Filter for Room 221E	234-5Z/263	25A	RE
FB 5	Secondary E-4 HEPA Filters for Room 154 and 155	234-5Z/308	25A	RE
FB 6	Secondary E-4 HEPA Filters for Room 131, 132 and 139	234-5Z/308	25A	RE
FB 2	Secondary E-4 HEPA Filters for Room 148 and 149	234-5Z/308	25A	RE
FB 26	Secondary E-4 HEPA Filters for Room 186 and 188	234-5Z/308	25A	RE
FB 8	Secondary E-4 HEPA Filters for Room 159	234-5Z/308	25A	RE
FB 1-N	Secondary E-4 HEPA Filters for Room 135	234-5Z/308	25A	RE
FB 1-S	Secondary E-4 HEPA Filters for Room 134 and 137	234-5Z/308	25A	RE
FB 20	Secondary E-4 HEPA Filters for RMA/RMC Line	234-5Z/308	25A	RE
FB 10	Secondary E-4 HEPA Filters for Room 170 and 174	234-5Z/320	25A	RE
FB 9AB	Final HEPA Filters for RMC/RMA Line HF Gloveboxes HC-9B/H-9A	234-5Z/308	25A	RE
FB 21	Secondary E-4 HEPA Filters for top level of HC-9B	234-5Z/262	25A	RE
FB 4	Secondary E-4 HEPA Filters for Room 136, 145, and 146	234-5Z/308	25A	RE
FB 3	Secondary E-4 HEPA Filters for Room 152 and 153	234-5Z/308	25A	RE

PFP SAFETY CLASS 1 SYSTEMS AND RELATED EQUIPMENT

KEY:S-SEISMIC C-CRITICALITY E-ENVIRONMENTAL
I-INDUSTRIAL SAFETY F-FIRE
R-RADIATION PROTECTION O-OSD

Component ID(s)	Description/Function	LOCATION/ ROOM	SYSTEM CODE(s)	PURPOSE CODE(S)
FB 17	Secondary E-4 HEPA Filters for Room 144W	234-5Z/308	25A	RE
FB 18	Secondary E-4 HEPA Filters for Room 156 and 157	234-5Z/308	25A	RE
FB 9A	Secondary HEPA Filters for RMA Line HF Glovebox H-9A	234-5Z/264	25A	RE
FB 22	Secondary HEPA Filters for RMC/RMA Line Gloveboxes	234-5Z/308	25A	RE
FB 9	Secondary E-4 HEPA Filters for Room 166	234-5Z/308	25A	RE
FB 19	Secondary E-4 HEPA Filters for Room 227	234-5Z/308	25A	RE
FB 7	Secondary E-4 HEPA Filters for Room 141, 142, and 143	234-5Z/308	25A	RE
FB 14	Secondary HEPA Filters for RMC/RMA Line Gloveboxes	234-5Z/320	25A	RE
FB 9B	Secondary HEPA Filters for RMC Line HF Glovebox HC-9B	234-5Z/263	25A	RE
FB 15	Secondary E-4 HEPA Filters for Room 185 and 186	234-5Z/308	25A	RE
FB 11	Secondary E-4 HEPA Filters for Room 179-C and 179-D	234-5Z/308	25A	RE
FB 12	Secondary E-4 HEPA Filters for Room 188, 189, and 190	234-5Z/308	25A	RE
FB-16-E	Secondary E-4 HEPA Filters for Room 143W	234-5Z/308	25A	RE
FB-16-W	Secondary E-4 HEPA Filters for Room 144E	234-5Z/308	25A	RE
FB-F2-S, FB-F4-S	Secondary E-4 HEPA Filters for Process Vacuum	234-5Z/308	25A	RE
FB242-Z	Secondary E-4 HEPA Filters for 242-Z	234-5Z/308	25A	RE
FR-309	Final E-4 HEPA Filter Room, 128 Filters	234-5Z/309	25A	RE
FR-310	Final E-4 HEPA Filter Room, 128 Filters	234-5Z/310	25A	RE
FR-311	Final E-3 HEPA Filter Room, 112 Filters	234-5Z/311	25A	RE
FR-312	Final E-3 HEPA Filter Room, 112 Filters	234-5Z/312	25A	RE
FR-313	Final E-3 HEPA Filter Room, 112 Filters	234-5Z/313	25A	RE

PFP SAFETY CLASS 1 SYSTEMS AND RELATED EQUIPMENT

KEY: S-SEISMIC C-CRITICALITY E-ENVIRONMENTAL
I-INDUSTRIAL SAFETY F-FIRE
R-RADIATION PROTECTION O-OSD

Component ID(s)	Description/Function	LOCATION/ ROOM	SYSTEM CODE(S)	PURPOSE CODE(S)
FR-314	Final E-3 HEPA Filter Room, 112 Filters	234-5Z/314	25A	RE
FR-315	Final E-3 HEPA Filter Room, 112 Filters	234-5Z/315	25A	RE
FR-316	Final E-3 HEPA Filter Room, 112 Filters	234-5Z/316	25A	RE
FR-318	Final E-3 HEPA Filter Room, 112 Filters	234-5Z/318	25A	RE
F-14-P1, F-14-P2, F-15-P1, F-15-P2, F-16-P1, F-16-P2, F-17-P1, F-17-P2, F-18-P1, F-18-P2, F-19-P1, F-19-P2, F-20-P1, F-20-P2, F-21-P1, F-21-P2	Secondary E-3/E-4 HEPA Filters for 2736-ZB	2736-ZB/600	25C	RE
F-14-S1, F-14-S2, F-15-S1, F-15-S2, F-16-S1, F-16-S2, F-17-S1, F-17-S2, F-18-S1, F-18-S2, F-19-S1, F-19-S2, F-20-S1, F-20-S2, F-21-S1, F-21-S2	Final E-3/E-4 HEPA Filters for 2736-ZB	2736-ZB/600	25C	RE
F-2-1, F-2-2	Final E-3/E-4 HEPA Filters for 2736-Z and 2736-ZA	2736-ZA	25C	RE

Table 1.3: Effluent Stack Air Monitors and Alarms

System: Effluent Stack Air Monitors and Alarms	Justification: The Effluent Stack Monitors ensure that the release of alpha emitting radionuclides to the environment via the building exhaust stacks is continuously monitored and alarms are initiated if the release exceeds identified limits. WHC-SD-CP-SDD-006
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PFP SAFETY CLASS 1 SYSTEMS AND RELATED EQUIPMENT				
KEY:S-SEISMIC C-CRITICALITY E-ENVIRONMENTAL I-INDUSTRIAL SAFETY F-FIRE R-RADIATION PROTECTION O-OSD				
Component (ID#)	Description/Function	LOCATION/ ROOM	SYSTEM CODE(S)	PURPOSE CODE(S)
Common Equipment				
ANN-CAM-221A	Room 221-A Alarm Annunciator Panel	234-5Z/221A	24A	RE
ANN-CAM-221A-HORN	Room 221-A Alarm Panel Annunciator Horn	234-5Z/221A	24A	RE
ANN-CAM-221A-RESET	Room 221-A Alarm Panel Annunciator Reset/Silence Button	234-5Z/221A	24A	RE
PANEL-K-321A	Room 321-A Alarm Annunciator Panel "K"	234-5Z/321A	24A	RE
PANEL-K-321A-BELL	Panel K Alarm Panel Annunciator Bell	234-5Z/321A	24A	RE
PANEL-K-321A-RESET	Panel K Alarm Panel Annunciator Reset/Silence Button	234-5Z/321A	24A	RE
291-Z-1 STACK for Buildings 234-5Z, 236-Z, and 242-Z				
291-Z-1 SAMPLE-PROBE	Sample Collection Probe	291-Z-1	24A	RE
291-Z-1 FLOW-SPLITTER	Sample Flow Splitter	291-Z-1	24A	RE
291-Z-1 CAM	Alpha CAM	291-Z-1	24A	RE
291-Z-1 FI-CAM	Alpha CAM Flow Indicator	291-Z-1	24A	RE
291-Z-1 VS-CAM	CAM Vacuum Switch	291-Z-1	24A	RE
291-Z-1 PUMP-CAM	CAM Sample Flow Regulator	291-Z-1	24A	RE
ANN-CAM-221A-W31	221-A CAM Alarm Annunciator Window	234-5Z/221A	24A	RE

PFP SAFETY CLASS 1 SYSTEMS AND RELATED EQUIPMENT

KEY:S-SEISMIC C-CRITICALITY E-ENVIRONMENTAL
I-INDUSTRIAL SAFETY F-FIRE
R-RADIATION PROTECTION O-OSD

Component ID(s)	Description/Function	LOCATION/ ROOM	SYSTEM CODE(S)	PURPOSE CODE(S)
ANN-CAM-221A-W32	221-A CAM Failure Alarm Annunciator Window	234-5Z/221A	24A	RE
ANN-CAM-221A-W21	221-A CAM Pump Failure Alarm Annunciator Window	234-5Z/221A	24A	RE
PANEL-K-321A-W46	321-A CAM Alarm Annunciator Window	234-5Z/321A	24A	RE
PANEL-K-321A-W51	321-A CAM Failure Alarm Annunciator Window	234-5Z/321A	24A	RE
PANEL-K-321A-W56	321-A Pump Failure Alarm Annunciator Window	234-5Z/321A	24A	RE
296-Z-3 STACK for Building 241-Z				
296-Z-3 SAMPLE-PROBE	Sample Collection Probe	296-Z-3	24A	RE
296-Z-3 FLOW-SPLITTER	Sample Flow Splitter	296-Z-3	24A	RE
296-Z-3 CAM	Alpha CAM	296-Z-3	24A	RE
296-Z-3 FI-CAM	Alpha CAM Flow Indicator	296-Z-3	24A	RE
296-Z-3 VS-CAM	CAM Vacuum Switch	296-Z-3	24A	RE
296-Z-3 PUMP-CAM	CAM Sample Flow Regulator	296-Z-3	24A	RE
ANN-CAM-221A-W29	221-A CAM Alarm Annunciator Window	234-5Z/221A	24A	RE
ANN-CAM-221A-W30	221-A CAM Failure Alarm Annunciator Window	234-5Z/221A	24A	RE
ANN-CAM-221A-W23	221-A Pump Failure Alarm Annunciator Window	234-5Z/221A	24A	RE
PANEL-K-321A-W47	321-A CAM Alarm Annunciator Window	234-5Z/321A	24A	RE
PANEL-K-321A-W52	321-A CAM Failure Alarm Annunciator Window	234-5Z/321A	24A	RE
PANEL-K-321A-57	321-A Pump Failure Alarm Annunciator Window	234-5Z/321A	24A	RE
296-Z-5 STACK for Building 2736-ZB				
PROBE-CAM-Z5	CAM Sample Collection Probe	296-Z-5	24A	RE

PFP SAFETY CLASS 1 SYSTEMS AND RELATED EQUIPMENT				
KEY: S-SEISMIC C-CRITICALITY E-ENVIRONMENTAL I-INDUSTRIAL SAFETY F-FIRE R-RADIATION PROTECTION O-OSD				
Component ID(s)	Description/Function	LOCATION/ ROOM	SYSTEM CODE(s)	PURPOSE CODE(S)
CAM-Z5	Alpha CAM	296-Z-5	24A	RE
FI-CAM-Z5	Alpha CAM Flow Indicator	296-Z-5	24A	RE
VS-CAM-Z5	Building 2736-ZB Vacuum Switch	296-Z-5	24A	RE
ANN-CAM-221A-W1	221-A Stack Alpha Alarm Annunciator Window	234-5Z/221A	24A	RE
ANN-CAM-221A-W2	221-A Alpha Failure Alarm Annunciator Window	234-5Z/221A	24A	RE
ANN-CAM-221A-W17	221-A Loss of Vacuum Alarm Annunciator Window	234-5Z/221A	24A	RE
ANN-PANEL-K-W48	321-A Alpha Alarm Annunciator Window	234-5Z/321A	24A	RE
ANN-PANEL-K-W53	321-A Alpha Failure Alarm Annunciator Window	234-5Z/321A	24A	RE
ANN-PANEL-N-W35	321-A Loss of Vacuum Annunciator	234-5Z/321A	24A	RE
ANN-CAM-631	Room 631 Alarm Annunciator Panel	2736-ZB/631	24A	RE
ANN-CAM-631-HORN	Room 631 Alarm Panel Annunciator Horn	2736-ZB/631	24A	RE
ANN-CAM-631-RESET	Room 631 Alarm Panel Annunciator Reset/Silence Button	2736-ZB/631	24A	RE
ANN-CAM-631-1A	Room 631 Alpha Alarm Annunciator Window	2736-ZB/631	24A	RE
ANN-CAM-631-1B	Room 631 Alpha Failure Alarm Annunciator Window	2736-ZB/631	24A	RE
ANN-CAM-631-15A	Room 631 Loss of Vacuum Alarm Annunciator Window	2736-ZB/631	24A	RE
296-Z-6 STACK for Building 2736-Z				
PROBE-CAM-Z6E	East Filter Bank CAM Sample Collection Probe	296-Z-6	24A	RE
PROBE-CAM-Z6W	West Filter Bank CAM Sample Collection Probe	296-Z-6	24A	RE
CAM-Z6E	East Filter Bank Alpha CAM	296-Z-6	24A	RE
CAM-Z6W	West Filter Bank Alpha CAM	296-Z-6	24A	RE

PFP SAFETY CLASS 1 SYSTEMS AND RELATED EQUIPMENT

KEY: S-SEISMIC C-CRITICALITY E-ENVIRONMENTAL
I-INDUSTRIAL SAFETY F-FIRE
R-RADIATION PROTECTION O-OSD

Component ID(s)	Description/Function	LOCATION/ ROOM	SYSTEM CODE(s)	PURPOSE CODE(S)
V-5012-23A	East Filter Bank Alpha CAM Sample Flow Control Valve	2736-ZA	24A	RE
V-5010-23A	West Filter Bank Alpha CAM Sample Flow Control Valve	2736-ZA	24A	RE
FI-CAM-Z6E	East Filter Bank Alpha CAM Sample Flow Indicator	296-Z-6	24A	RE
FI-CAM-Z6W	West Filter Bank Alpha CAM Sample Flow Indicator	296-Z-6	24A	RE
PS-1-2	Building 2736-ZA Vacuum Switch	2736-ZA	24A	RE
ANN-CAM-221A-W35	221-A West Filter Bank CAM Alarm Annunciator Window	234-5Z/221A	24A	RE
ANN-CAM-221A-W36	221-A West Filter Bank CAM Failure Alarm Annunciator Window	234-5Z/221A	24A	RE
ANN-CAM-221A-W37	221-A East Filter Bank CAM Alarm Annunciator Window	234-5Z/221A	24A	RE
ANN-CAM-221A-W38	221-A East Filter Bank CAM Failure Alarm Annunciator Window	234-5Z/221A	24A	RE
ANN-CAM-221A-W39	221-A Loss of Instrument Vacuum Alarm Annunciator Window	234-5Z/221A	24A	RE
PANEL-K-321A-W54	321-A CAM Alarm/Failure Annunciator Window	234-5Z/321A	24A	RE

Table 1.4: HVAC Supply Fan Seismic Shutdown System

System: HVAC Supply Fan Seismic Shutdown System	Justification: A significant contamination spread could result from a 0.25g safe shutdown earthquake if the building were pressurized by the main supply fans while the exhaust fans no longer functioned. Analysis with seismic fan shutdown predicts a maximum of 0.5 REM EDE offsite (excluding 232-Z) and without seismic supply shutdown the dose may increase to 3.9 REM EDE. WHC-SD-CP-SDD-004
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PFP SAFETY CLASS 1 SYSTEMS AND RELATED EQUIPMENT				
KEY: S-SEISMIC C-CRITICALITY E-ENVIRONMENTAL I-INDUSTRIAL SAFETY F-FIRE R-RADIATION PROTECTION O-OSD				
Component ID(s)	Description/Function	LOCATION/ ROOM	SYSTEM CODE(s)	PURPOSE CODE(S)
ACCELEROMETER-1	Accelerometer 1, detects earthquake greater than 0.07g.	234-5Z/Corr 14	99B	RES
ACCELEROMETER-2	Accelerometer 2, detects earthquake greater than 0.07g.	234-5Z/Corr 14	99B	RES
RLY-K1-99B, RLY-K2-99B RLY-K3-99B, RLY-K4-99B	Seismic shutdown control panel relays	234-5Z/Corr 14	99B	RES
MS-SEL1-99B MS-SEL2-99B	Accelerometer ONLINE/BYPASS switches	234-5Z/Corr 14	99B	RES
AL-HORN1-99B AL-HORN2-99B	Seismic fan disabled alarm horns	234-5Z/321A	99B	RES
I-LITE1-99B	Seismic fan disabled alarm light	234-5Z/Exterior Col A-5	99B	RES
RLY-UV1-12A, RLY-UV2-12A RLY-UV3-12A, RLY-UV4-12A RLY-UV5-12A, RLY-UV6-12A RLY-UV7-12A, RLY-UV8-12A	Undervoltage relays for supply fan breakers 1 through 8	234-5Z/266	12A	RES
F8X103, F8X105, F8X106 F8X107, F8X205, F8X206 F8X207, F8X211	Breakers for supply fans 1 through 8	234-5Z/266	12A	RES
RLY-KES1-99B	Shutdown relay for electric and steam air dryers	234-5Z/321A	99B	RES

PFP SAFETY CLASS 1 SYSTEMS AND RELATED EQUIPMENT

KEY: S-SEISMIC C-CRITICALITY E-ENVIRONMENTAL
I-INDUSTRIAL SAFETY F-FIRE
R-RADIATION PROTECTION O-OSD

Component ID(s)	Description/Function	LOCATION/ ROOM	SYSTEM CODE(s)	PURPOSE CODE(S)
RLY-CR1E-23D	Electric air dryer relay CR1	234-5Z/321	23D	RES
RLY-CR1S-23D	Steam air dryer relay CR1	234-5Z/321	23D	RES
RLY-1ME-23D	Electric air dryer stage 1 process fan motor relay 1M	234-5Z/321	23D	RES
RLY-1MS-23D	Steam air dryer stage 1 process fan motor relay 1M	234-5Z/321	23D	RES
RLY-3ME-23D	Electric air dryer stage 2 process fan motor relay 3M	234-5Z/321	23D	RES
RLY-3MS-23D	Steam air dryer stage 2 process fan motor relay 3M	234-5Z/321	23D	RES

Table 1.5: Liquid detector and interlock in 26" Vacuum System

System: Liquid detector and interlock in 26" Vacuum System	Justification: Upon detection of liquid in 26" vacuum header, this system must shutdown to preclude liquid from entering geometrically unfavorable HEPA filters. Although a criticality is shown not to cause doses requiring classification 1 or 2, Criterion 1.e., of Table 1 in MRP 5.48 demands such features be Class 1 if their failure could result in the loss of double contingency protection. WHC-SD-CP-SDD-013
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PFP SAFETY CLASS 1 SYSTEMS AND RELATED EQUIPMENT KEY: S-SEISMIC C-CRITICALITY E-ENVIRONMENTAL I-INDUSTRIAL SAFETY F-FIRE R-RADIATION PROTECTION O-OSD				
Component ID(s)	Description/Function	LOCATION/ ROOM	SYSTEM CODE(s)	PURPOSE CODE(S)
BR-1LD-23B	Rectifier changes 220 VAC to 220 VDC for liquid detection trouble indicator circuit for liquid detection interlock system in header upstream of demister #6	234-5Z/321A	23B	C
BR-2LD-23B	Rectifier (2): changes 220 VAC to 220 VDC for liquid detection trouble indicator circuit for liquid detection interlock system in header upstream of demister #7	234-5Z/321A	23B	C
CA-1LDA-23B	Annunciator alarms liquid intrusion into vacuum lines upstream of demisters #6	234-5Z/321A	23B	C
CA-1LDB-23B	Annunciator alarms liquid detection circuit trouble (open circuit) for liquid detection interlock system in vacuum header upstream of demister #6	234-5Z/321A	23B	C
CA-2LDC-23B	Annunciator alarms liquid intrusion into vacuum lines upstream of demister #7	234-5Z/321A	23B	C
CA-2LDD-23B	Annunciator alarms liquid detection circuit trouble (open circuit) for liquid detection interlock system in vacuum header upstream of demister #7	234-5Z/321A	23B	C
CE-1LD-23B	Conductivity Probe, demister #6 header, detects presence of liquid and conducts a signal from probe to induction relay.	234-5Z/308	23B	C
CE-2LD-23B	Conductivity Probe, demister #7 header, detects presence of liquid and conducts a signal from probe to induction relay.	234-5Z/308	23B	C
CR-1K1-23B	Relay- activates liquid detection annunciator CA-1LDA-23B and deenergizes solenoid valve EV-1LD-23B	234-5Z/321A	23B	C
CR-1K2-23B	Relay- activates annunciator for liquid detection circuit trouble CA-1LDB-23B	234-5Z/321A	23B	C
CR-1K3-23B	Relay removes power from vacuum pump motor controllers MC-VPP1-23B and MC-VPP2-23B; each relay removes power from both controllers	234-5Z/321A	23B	C

PFP SAFETY CLASS 1 SYSTEMS AND RELATED EQUIPMENT

KEY: S-SEISMIC C-CRITICALITY E-ENVIRONMENTAL
I-INDUSTRIAL SAFETY F-FIRE
R-RADIATION PROTECTION O-OSD

Component ID(s)	Description/Function	LOCATION/ ROOM	SYSTEM CODE(s)	PURPOSE CODE(S)
CR-2K1-23B	Relay- activates liquid detection annunciator CA-2LDC-23B and deenergizes solenoid valve EV-2LD-23B	234-5Z/321A	23B	C
CR-2K2-23B	Relay- activates liquid detection circuit trouble annunciator CA-2LDD-23B	234-5Z/321A	23B	C
CR-2K3-23B	Relay removes power from vacuum pump motor controllers MC-VPP1-23B and MC-VPP2-23B; each relay removes power from both controllers	234-5Z/321A	23B	C
CR-1LD1-23B	Induction Relay- activates liquid detection circuit by deenergizing relays CR-1K1-23B and CR-1K3-23B and illuminates circuit trouble indicator light L-1LD-23B	234-5Z/321A	23B	C
CR-1LD2-23B	Relay- deenergizes relay CR-1K2-23B energizes circuit trouble indicator light L-1LD-23B	234-5Z/321A	23B	C
CR-2LD1-23B	Induction Relay- activates liquid detection circuit by deenergizing relays CR-2K1-23B and CR-2K3-23B and illuminates circuit trouble indicator light L-2LD-23B	234-5Z/321A	23B	C
CR-2LD2-23B	Relay- deenergizes relay CR-2K2-23B, energizes circuit trouble indicator light L-2LD-23B		23B	C
EV-PVLDL-1	Solenoid Valve vents air from butterfly valves CV-PVLDL-1, CV-PVLDL-2; each solenoid vents air from both butterfly valves	234-5Z/308	23B	C
EV-PVLDL-2	Solenoid Valve vents air from butterfly valves CV-PVLDL-1, CV-PVLDL-2; each solenoid vents air from both butterfly valves	234-5Z/308	23B	C
CV-PVLDL-1	Butterfly Valve isolates vacuum line upstream of HEPA filters	234-5Z/308	23B	C
CV-PVLDL-2	Butterfly Valve isolates vacuum line upstream of HEPA filters	234-5Z/308	23B	C
HS-1LD-23B	Switch- tests liquid detection circuit trouble indicator light L-1LD-23B and annunciator CA-1LDB-23B	234-5Z/321	23B	C
HS-2LD-23B	Switch tests liquid detection circuit trouble indicator light L-2LD-23B and annunciator CA-2LDD-23B	234-5Z/321	23B	C
MC-VPP1-23B	Motor Controller opens and closes power circuits for vacuum pump PVVP-1 motor	234-5Z/262	23B	C
MC-VPP2-23B	Motor Controller opens and closes power circuits for vacuum pump PVVP-2 motor	234-5Z/262	23B	C
R-1LD-23B	Resistor reduces voltage in liquid detection trouble circuit from 220 VDC to 110 VDC across relay coil CR-1LD2-23B	234-5Z/321	23B	C

PFP SAFETY CLASS 1 SYSTEMS AND RELATED EQUIPMENT				
KEY: S-SEISMIC C-CRITICALITY E-ENVIRONMENTAL I-INDUSTRIAL SAFETY F-FIRE R-RADIATION PROTECTION O-OSD				
Component ID(s)	Description/Function	LOCATION/ ROOM	SYSTEM CODE(s)	PURPOSE CODE(S)
R-2LD-23B	Resistor reduces voltage in liquid detection trouble circuit from 220 VDC to 110 VDC across relay coil CR-2LD2-23B	234-5Z/321	23B	C

Table 1.6: Glovebox Criticality Design Features

System: Glovebox Criticality Design Features	Justification: This equipment provides a defined contingency in the double contingency principle of nuclear criticality. Components whose failure could result in the loss of double contingency protection for an accidental nuclear criticality independent of dose consequences are Safety Class 1. WHC-SD-CP-SDD-008
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PFP SAFETY CLASS 1 SYSTEMS AND RELATED EQUIPMENT				
KEY:S-SEISMIC C-CRITICALITY E-ENVIRONMENTAL I-INDUSTRIAL SAFETY F-FIRE R-RADIATION PROTECTION O-OSD				
Component ID(s)	Description/Function	LOCATION/ ROOM	SYSTEM CODE(S)	PURPOSE CODE(S)
CRDR-1ST_EAST	1st Floor East Access Glovebox Criticality Drain and Screen	234-5Z/Corr 14	72	C
CRDR-1ST_WEST	1st Floor West Access Glovebox Criticality Drain and Screen	234-5Z/Corr11	72	C
CRDR-HA-23S	Glovebox HC-23S Criticality Drain and Screen	234-5Z/235B	74	C
CRDR-HC-4	Glovebox HC-4 Criticality Drain and Screen	234-5Z/166	73BA	C
CRDR-HC-6	Glovebox HC-6 Criticality Drain and Screen	234-5Z/166	73BB	C
CRDR-HC-7	Glovebox HC-7 Criticality Drain and Screen	234-5Z/228-A	72	C
CRDR-HC-9B	Glovebox HC-9B Criticality Drain and Screen	234-5Z/228-A	72	C
CRDR-HC-227S	Glovebox HC-227S Criticality Drain and Screen	234-5Z/227	72AB	C
CRDR-MT-5	Glovebox MT-5 Criticality Drain and Screen	236-Z/41	72D	C
CRDR-MT-6	Glovebox MT-6 Criticality Drain and Screen	236-Z/41	72E	C
GB-HC6-SUMP_PLATE GB-HC6-RASCHIG_RINGS	Glovebox HC-6 Floor Filler Plates and Overflow Tank Pit Raschlig Rings	234-5Z/166	73BB	C
GB-HC7-SUMP_DISC	Glovebox HC-7 Sump Filler Discs	234-5Z/228A	73CC	C
GB-HC9B-SUMP_DISC	Glovebox HC-9B Sump Filler Discs	234-5Z/228A	73DJ	C

PFP SAFETY CLASS 1 SYSTEMS AND RELATED EQUIPMENT

KEY:S-SEISMIC C-CRITICALITY E-ENVIRONMENTAL
I-INDUSTRIAL SAFETY F-FIRE
R-RADIATION PROTECTION O-OSD

Component ID(s)	Description/Function	LOCATION/ ROOM	SYSTEM CODE(s)	PURPOSE CODE(S)
CRDR-2ND_WEST-1 CRDR-2ND_WEST-2 CRDR-2ND_WEST-3 CRDR-2ND_WEST-4 CRDR-2ND_WEST-5 CRDR-2ND_WEST-6 CRDR-2ND_WEST-7 CRDR-2ND_WEST-8 CRDR-2ND_WEST-9 CRDR-2ND_WEST-10 CRDR-2ND_WEST-11	2nd Floor West Access Glovebox Criticality Drains	236-Z/2ND WEST	72	C
CRDR-2ND_EAST-1 CRDR-2ND_EAST-2 CRDR-2ND_EAST-3 CRDR-2ND_EAST-4 CRDR-2ND_EAST-5 CRDR-2ND_EAST-6 CRDR-2ND_EAST-7 CRDR-2ND_EAST-8 CRDR-2ND_EAST-9 CRDR-2ND_EAST-10	2nd Floor East Access Glovebox Criticality Drains	236-Z/2ND EAST	72	C
CRDR-10-179	Glovebox 179-10 Criticality Drain and Screen	234-5Z/179	86B	C
CRDR-12-179	Glovebox 179-12 Criticality Drain and Screen	234-5Z/179	86B	C
CRDR-1-188	Glovebox 188-1 Criticality Drain and Screen	234-5Z/188	86B	C
CRDR-522	Glovebox 522 Criticality Drain and Screen	234-5Z/152	86A	C
CRDR-4TH_COLUMN	4th Floor Column Glovebox Criticality Drains	236-Z/40	72	C
CRDR-5TH_COLUMN	5th Floor Column Glovebox Criticality Drains	236-Z/50	72	C
CRDR-6TH_COLUMN	6th Floor Column Glovebox Criticality Drains	236-Z/60	72	C

Table 1.7: Plutonium Storage Arrays

System: Plutonium Storage Arrays	Justification: This equipment provides a defined contingency in the double contingency principle of nuclear criticality. Components whose failure could result in the loss of double contingency protection for an accidental nuclear criticality independent of dose consequences are Safety Class 1.			
PFP SAFETY CLASS 1 SYSTEMS AND RELATED EQUIPMENT				
KEY:S-SEISMIC C-CRITICALITY E-ENVIRONMENTAL I-INDUSTRIAL SAFETY F-FIRE R-RADIATION PROTECTION O-OSD				
Component ID(s)	Description/Function	LOCATION/ ROOM	SYSTEM CODE(s)	PURPOSE CODE(S)
N/A	Plutonium Storage Arrays	ALL	74	CS

Table 2.1: Criticality Alarm System (CAS)

System:	Criticality Alarm System (CAS)	Justification:
		The CAS minimizes radiation exposure of plant and other on-site personnel by providing timely detection of high radiation and an evacuation alarm in the event of a nuclear criticality. WHC-SD-CP-SDD-003

PPF SAFETY CLASS 2 SYSTEMS AND RELATED EQUIPMENT				
KEY:S-SEISMIC C-CRITICALITY E-ENVIRONMENTAL I-INDUSTRIAL SAFETY F-FIRE R-RADIATION PROTECTION O-OSD				
Component ID(s)	Description/Function	LOCATION/ ROOM	SYSTEM CODE(s)	PURPOSE CODE(S)
ZONE 1				
CAP-Z1	Criticality Alarm Panel Z1	234-5Z/Corr 2	99A	CR
ASG-Z1	Audible Signal Generator in CAP-Z1	CAP-Z1	99A	CR
CAD-Z1-1A, CAD-Z1-1B CAD-Z1-1C	Criticality Alarm Detectors (Gamma)	234-5Z/221A	99A	CR
CAD-Z1-2A, CAD-Z1-2B CAD-Z1-2C	Criticality Alarm Detectors (Gamma)	234-5Z/Corr 5	99A	CR
CAD-Z1-3A, CAD-Z1-3B CAD-Z1-3C	Criticality Alarm Detectors (Gamma)	234-5Z/262	99A	CR
CAD-Z1-4A, CAD-Z1-4B CAD-Z1-4C	Criticality Alarm Detectors (Gamma)	234-5Z/Corr 242B	99A	CR
CAD-Z1-5A, CAD-Z1-5B CAD-Z1-5C	Criticality Alarm Detectors (Gamma)	234-5Z/Corr 4B	99A	CR
CAD-Z1-6A, CAD-Z1-6B CAD-Z1-6C	Criticality Alarm Detectors (Gamma)	234-5Z/192A	99A	CR
CADM-Z1-1A CADM-Z1-1B CADM-Z1-1C	Criticality Alarm Detector Modules in CAP-Z1	234-5Z/Corr 2	99A	CR
CADM-Z1-2A CADM-Z1-2B CADM-Z1-2C	Criticality Alarm Detector Modules in CAP-Z1	234-5Z/Corr 2	99A	CR

PFP SAFETY CLASS 2 SYSTEMS AND RELATED EQUIPMENT				
KEY:S-SEISMIC C-CRITICALITY E-ENVIRONMENTAL I-INDUSTRIAL SAFETY F-FIRE R-RADIATION PROTECTION O-OSD				
Component ID(s)	Description/Function	LOCATION/ ROOM	SYSTEM CODE(s)	PURPOSE CODE(S)
CADM-Z1-3A CADM-Z1-3B CADM-Z1-3C	Criticality Alarm Dectector Modules in CAP-Z1	234-5Z/Corr 2	99A	CR
CADM-Z1-4A CADM-Z1-4B CADM-Z1-4C	Criticality Alarm Dectector Modules in CAP-Z1	234-5Z/Corr 2	99A	CR
CADM-Z1-5A CADM-Z1-5B CADM-Z1-5C	Criticality Alarm Dectector Modules in CAP-Z1	234-5Z/Corr 2	99A	CR
CADM-Z1-6A CADM-Z1-6B CADM-Z1-6C	Criticality Alarm Dectector Modules in CAP-Z1	234-5Z/Corr 2	99A	CR
CAH-Z1-1 CAH-Z1-2 CAH-Z1-3 CAH-Z1-4 CAH-Z1-5 CAH-Z1-6 CAH-Z1-7 CAH-Z1-8 CAH-Z1-9 CAH-Z1-10 CAH-Z1-11 CAH-Z1-12 CAH-Z1-13 CAH-Z1-14 CAH-Z1-15 CAH-Z1-16 CAH-Z1-17 CAH-Z1-18 CAH-Z1-19 CAH-Z1-20 CAH-Z1-21 CAH-Z1-22 CAH-Z1-23	Criticality Alarm Horns for CAP-Z1	234-5Z/Corr 2 234-5Z/124 234-5Z/116 234-5Z/221E 234-5Z/Corr 3 234-5Z/Corr 242-B 234-5Z/Corr 4 234-5Z/Corr 4C 242-Z 234-5Z/134 234-5Z/133 242-Z 234-5Z/E. Wall 234-5Z/S. Wall 234-5Z/Corr 1 234-5Z/N. Wall 234-5Z/132 234-5Z/221D 234-5Z/221C 234-5Z/221B 234-5Z/NE Roof 234-5Z/N. Roof 234-5Z/S. Roof	99A	CR

PFP SAFETY CLASS 2 SYSTEMS AND RELATED EQUIPMENT

KEY: S-SEISMIC C-CRITICALITY E-ENVIRONMENTAL
I-INDUSTRIAL SAFETY F-FIRE
R-RADIATION PROTECTION O-OSD

Component ID(s)	Description/Function	LOCATION/ ROOM	SYSTEM CODE(S)	PURPOSE CODE(S)
CALM-Z1-1 CALM-Z1-2 CALM-Z1-3	Criticality Alarm Logic Modules in CAP-Z1	234-5Z/Corr 2	99A	CR
CARM-Z1	Criticality Alarm Relay Module in CAP-Z1	234-5Z/Corr 2	99A	CR
CBS-Z1-1	Central Battery System for CAP-Z1	234-5Z/Corr 2	99A	CR
MIR	Master Intertie Relay Box located near CAP-Z1	234-5Z/Corr 2	99A	CR
Z1-K5	Master Intertie Relay in CAP-Z1	234-5Z/Corr 2	99A	CR
Z1-K6	Master Intertie Relay in CAP-Z1	234-5Z/Corr 2	99A	CR
ZONE 2				
CAP-Z2	Criticality Alarm Panel Z2	234-5Z/Corr 2	99A	CR
ASG-Z2	Audible Signal Generator in CAP-Z2	234-5Z/Corr 2	99A	CR
CAD-Z2-1A, CAD-Z2-1B CAD-Z2-1C	Criticality Alarm Detectors (Gamma)	234-5Z/235A-3	99A	CR
CAD-Z2-2A, CAD-Z2-2B CAD-Z2-2C	Criticality Alarm Detectors (Gamma)	234-5Z/Corr 5	99A	CR
CAD-Z2-3A, CAD-Z2-3B CAD-Z2-3C	Criticality Alarm Detectors (Gamma)	234-5Z/166	99A	CR
CAD-Z2-4A, CAD-Z2-4B CAD-Z2-4C	Criticality Alarm Detectors (Gamma)	234-5Z/308	99A	CR
CADM-Z2-1A CADM-Z2-1B CADM-Z2-1C	Criticality Alarm Detector Modules in CAP-Z1	234-5Z/Corr 2	99A	CR
CADM-Z2-2A CADM-Z2-2B CADM-Z2-2C	Criticality Alarm Detector Modules in CAP-Z2	234-5Z/Corr 2	99A	CR

PFP SAFETY CLASS 2 SYSTEMS AND RELATED EQUIPMENT

KEY:S-SEISMIC C-CRITICALITY E-ENVIRONMENTAL
I-INDUSTRIAL SAFETY F-FIRE
R-RADIATION PROTECTION O-OSD

Component ID(s)	Description/Function	LOCATION/ ROOM	SYSTEM CODE(s)	PURPOSE CODE(S)
CADM-Z2-3A CADM-Z2-3B CADM-Z2-3C	Criticality Alarm Detector Modules in CAP-Z2	234-5Z/Corr 2	99A	CR
CADM-Z2-4A CADM-Z2-4B CADM-Z2-4C	Criticality Alarm Detector Modules in CAP-Z2	234-5Z/Corr 2	99A	CR
CAH-Z2-1 CAH-Z2-2 CAH-Z2-3 CAH-Z2-4 CAH-Z2-5 CAH-Z2-6 CAH-Z2-7 CAH-Z2-8 CAH-Z2-9 CAH-Z2-10 CAH-Z2-11 CAH-Z2-12 CAH-Z2-13 CAH-Z2-14 CAH-Z2-15 CAH-Z2-16 CAH-Z2-17 CAH-Z2-18 CAH-Z2-19 CAH-Z2-20 CAH-Z2-22	Criticality Alarm Horns for CAP-Z2	234-5Z/221 234-5Z/224 234-5Z/229 234-5Z/232 234-5Z/233 234-5Z/Corr 5 234-5Z/S. Wall 234-5Z/262 234-5Z/262 234-5Z/262 234-5Z/263 234-5Z/260 291-Z/502 291-Z/502 291-Z/502 291-Z/502 234-5Z/Tun 2 234-5Z/Tun 1 234-5Z/S. Wall 291-Z/502	99A	CR
CAH-Z2-23 CAH-Z2-24 CAH-Z2-25	Criticality Alarm Horns for CAP-Z2	291-Z/501 291-Z/501 291-Z/500	99A	CR
CALM-Z2-1 CALM-Z2-2	Criticality Alarm Logic Module in CAP-Z2	234-5Z/Corr 2	99A	CR
CARM-Z2	Criticality Alarm Relay Module in CAP-Z2	234-5Z/Corr 2	99A	CR

PFP SAFETY CLASS 2 SYSTEMS AND RELATED EQUIPMENT

KEY: S-SEISMIC C-CRITICALITY E-ENVIRONMENTAL
I-INDUSTRIAL SAFETY F-FIRE
R-RADIATION PROTECTION O-OSD

Component ID(s)	Description/Function	LOCATION/ ROOM	SYSTEM CODE(s)	PURPOSE CODE(S)
CBS-Z2-1	Central Battery System for CAP-Z2	234-5Z/Corr 2	99A	CR
ZONE 3				
CAP-Z3	Criticality Alarm Panel Z3	234-5Z/Corr 13	99A	CR
ASG-Z3	Audible Signal Generator in CAP-Z3	234-5Z/Corr 13	99A	CR
CAD-Z3-1A, CAD-Z3-1B CAD-Z3-1C	Criticality Alarm Detectors (Gamma)	234-5Z/Corr 14A	99A	CR
CAD-Z3-2A, CAD-Z3-2B CAD-Z3-2C	Criticality Alarm Detectors (Gamma)	234-5Z/235B	99A	CR
CAD-Z3-3A, CAD-Z3-3B CAD-Z3-3C	Criticality Alarm Detectors (Gamma)	234-5Z/179	99A	CR
CAD-Z3-4A, CAD-Z3-4B CAD-Z3-4C	Criticality Alarm Detectors (Gamma)	234-5Z/221C	99A	CR
CAD-Z3-5A, CAD-Z3-5B CAD-Z3-5C	Criticality Alarm Detectors (Gamma)	234-5Z/Corr 10	99A	CR
CAD-Z3-6A, CAD-Z3-6B CAD-Z3-6C	Criticality Alarm Detectors (Gamma)	234-5Z/Corr 6	99A	CR
CADM-Z3-1A CADM-Z3-1B CADM-Z3-1C	Criticality Alarm Detector Modules in CAP-Z3	234-5Z/Corr 13	99A	CR
CADM-Z3-2A CADM-Z3-2B CADM-Z3-2C	Criticality Alarm Detector Modules in CAP-Z3	234-5Z/Corr 13	99A	CR
CADM-Z3-3A CADM-Z3-3B CADM-Z3-3C	Criticality Alarm Detector Modules in CAP-Z3	234-5Z/Corr 13	99A	CR

PFP SAFETY CLASS 2 SYSTEMS AND RELATED EQUIPMENT KEY:S-SEISMIC C-CRITICALITY E-ENVIRONMENTAL I-INDUSTRIAL SAFETY F-FIRE R-RADIATION PROTECTION O-OSD				
Component ID(s)	Description/Function	LOCATION/ ROOM	SYSTEM CODE(s)	PURPOSE CODE(S)
CADM-Z3-4A CADM-Z3-4B CADM-Z3-4C	Criticality Alarm Detector Modules in CAP-Z3	234-5Z/Corr 13	99A	CR
CADM-Z3-5A CADM-Z3-5B CADM-Z3-5C	Criticality Alarm Detector Modules in CAP-Z3	234-5Z/Corr 13	99A	CR
CADM-Z3-6A CADM-Z3-6B CADM-Z3-6C	Criticality Alarm Detector Modules in CAP-Z3	234-5Z/Corr 13	99A	CR
CAH-Z3-1 CAH-Z3-2 CAH-Z3-3 CAH-Z3-4 CAH-Z3-5 CAH-Z3-6 CAH-Z3-7 CAH-Z3-8 CAH-Z3-9 CAH-Z3-10 CAH-Z3-11 CAH-Z3-12 CAH-Z3-13 CAH-Z3-14 CAH-Z3-15	Criticality Alarm Horns for CAP-Z3	234-5Z/Corr 14A 234-5Z/Corr 13 234-5Z/235B 234-5Z/230C 234-5Z/170 234-5Z/172 234-5Z/Corr 6 234-5Z/179 2734-ZG 234-5Z/264 234-5Z/265 234-5Z/264 234-5Z/262 234-5Z/262 234-5Z/199	99A	CR
CALM-Z3-1 CALM-Z3-2 CALM-Z3-3	Criticality Alarm Logic Module in CAP-Z3	234-5Z/Corr 13	99A	CR
CARM-Z3	Criticality Alarm Relay Module in CAP-Z3	234-5Z/Corr 13	99A	CR
CBS-Z3-1	Central Battery System for CAP-Z3	234-5Z/Corr 13	99A	CR
ZONE 4				
CAP-Z4	Criticality Alarm Panel Z4	234-5Z/236	99A	CR

PFP SAFETY CLASS 2 SYSTEMS AND RELATED EQUIPMENT KEY: S-SEISMIC C-CRITICALITY E-ENVIRONMENTAL I-INDUSTRIAL SAFETY F-FIRE R-RADIATION PROTECTION O-OSD				
Component ID(s)	Description/Function	LOCATION/ ROOM	SYSTEM CODE(s)	PURPOSE CODE(S)
ASG-Z4	Audible Signal Generator in CAP-Z4	234-5Z/236	99A	CR
CAD-Z4-1A, CAD-Z4-1B CAD-Z4-1C	Criticality Alarm Detectors (Gamma)	234-5Z/236	99A	CR
CAD-Z4-2A, CAD-Z4-2B CAD-Z4-2C	Criticality Alarm Detectors (Gamma)	234-5Z/Corr 239A	99A	CR
CAD-Z4-3A, CAD-Z4-3B CAD-Z4-3C	Criticality Alarm Detectors (Gamma)	234-5Z/264	99A	CR
CAD-Z4-4A, CAD-Z4-4B CAD-Z4-4C	Criticality Alarm Detectors (Gamma)	234-5Z/Corr 3	99A	CR
CAD-Z4-5A, CAD-Z4-5B CAD-Z4-5C	Criticality Alarm Detectors (Gamma)	234-5Z/192B	99A	CR
CAD-Z4-6A, CAD-Z4-6B CAD-Z4-6C	Criticality Alarm Detectors (Gamma)	234-5Z/192C	99A	CR
CADM-Z4-1A CADM-Z4-1B CADM-Z4-1C	Criticality Alarm Detector Modules in CAP-Z4	234-5Z/236	99A	CR
CADM-Z4-2A CADM-Z4-2B CADM-Z4-2C	Criticality Alarm Detector Modules in CAP-Z4	234-5Z/236	99A	CR
CADM-Z4-3A CADM-Z4-3B CADM-Z4-3C	Criticality Alarm Detector Modules in CAP-Z4	234-5Z/236	99A	CR
CADM-Z4-4A CADM-Z4-4B CADM-Z4-4C	Criticality Alarm Detector Modules in CAP-Z4	234-5Z/236	99A	CR
CADM-Z4-5A CADM-Z4-5B CADM-Z4-5C	Criticality Alarm Detector Modules in CAP-Z4	234-5Z/236	99A	CR

PFP SAFETY CLASS 2 SYSTEMS AND RELATED EQUIPMENT				
KEY:S-SEISMIC C-CRITICALITY E-ENVIRONMENTAL I-INDUSTRIAL SAFETY F-FIRE R-RADIATION PROTECTION O-OSD				
Component ID(s)	Description/Function	LOCATION/ ROOM	SYSTEM CODE(s)	PURPOSE CODE(S)
CADM-Z4-6A CADM-Z4-6B CADM-Z4-6C	Criticality Alarm Detector Modules in CAP-Z4	234-5Z/236	99A	CR
CAH-Z4-1 CAH-Z4-2 CAH-Z4-3 CAH-Z4-4 CAH-Z4-5 CAH-Z4-6 CAH-Z4-7 CAH-Z4-8 CAH-Z4-9 CAH-Z4-10 CAH-Z4-11 CAH-Z4-12 CAH-Z4-13 CAH-Z4-14 CAH-Z4-15 CAH-Z4-16 CAH-Z4-17 CAH-Z4-18 CAH-Z4-19 CAH-Z4-20 CAH-Z4-21 CAH-Z4-22 CAH-Z4-23 CAH-Z4-24 CAH-Z4-25 CAH-Z4-26 CAH-Z4-27 CAH-Z4-28 CAH-Z4-30	Criticality Alarm Horns for CAP-Z4	234-5Z/194 234-5Z/Corr 292 234-5Z/192A 234-5Z/192B 234-5Z/192C 234-5Z/270 234-5Z/183 234-5Z/Corr 6 224-5Z/321 234-5Z/Corr 3 234-5Z/308 234-5Z/308 234-5Z/308 234-5Z/341 234-5Z/306A 234-5Z/Corr 1 234-5Z/N. Wall 234-5Z/Stair 13 234-5Z/W Wall 234-5Z/265 234-5Z/235D 234-5Z/NW Roof 234-5Z/W Roof 234-5Z/192 234-5Z/236 234-5Z/236 224-5Z/N Roof 234-5Z/187	99A	CR
CALM-Z4-1 CALM-Z4-2 CALM-Z4-3	Criticality Alarm Logic Module in CAP-Z4	234-5Z/236	99A	CR
CARM-Z4	Criticality Alarm Relay Module in CAP-Z4	234-5Z/236	99A	CR

PFP SAFETY CLASS 2 SYSTEMS AND RELATED EQUIPMENT

KEY: S-SEISMIC C-CRITICALITY E-ENVIRONMENTAL
I-INDUSTRIAL SAFETY F-FIRE
R-RADIATION PROTECTION O-OSD

Component ID(s)	Description/Function	LOCATION/ ROOM	SYSTEM CODE(s)	PURPOSE CODE(S)
CBS-Z4-1	Central Battery System for CAP-Z4	234-5Z/236	99A	CR
ZONE 5				
CAP-Z5	Criticality Alarm Panel Z5	236-Z/44	99A	CR
ASG-Z5	Audible Signal Generator in CAP-Z5	236-Z/44	99A	CR
CAD-Z5-1A, CAD-Z5-1B CAD-Z5-1C	Criticality Alarm Detectors (Gamma)	236-Z/43	99A	CR
CAD-Z5-2A, CAD-Z5-2B CAD-Z5-2C	Criticality Alarm Detectors (Gamma)	236-Z/41	99A	CR
CAD-Z5-3A, CAD-Z5-3B CAD-Z5-3C	Criticality Alarm Detectors (Gamma)	236-Z/Stair 2	99A	CR
CAD-Z5-4A, CAD-Z5-4B CAD-Z5-4C	Criticality Alarm Detectors (Gamma)	236-Z/50	99A	CR
CAD-Z5-5A, CAD-Z5-5B CAD-Z5-5C	Criticality Alarm Detectors (Gamma)	236-Z/3rd Floor Elevator	99A	CR
CAD-Z5-6A, CAD-Z5-6B CAD-Z5-6C	Criticality Alarm Detectors (Gamma)	236-Z/12	99A	CR
CAD-Z5-7A, CAD-Z5-7B CAD-Z5-7C	Criticality Alarm Detectors (Gamma)	236-Z/26	99A	CR
CADM-Z5-1A CADM-Z5-1B CADM-Z5-1C	Criticality Alarm Detector Modules in CAP-Z5	236-Z/44	99A	CR
CADM-Z5-2A CADM-Z5-2B CADM-Z5-2C	Criticality Alarm Detector Modules in CAP-Z5	236-Z/44	99A	CR
CADM-Z5-3A CADM-Z5-3B CADM-Z5-3C	Criticality Alarm Detector Modules in CAP-Z5	236-Z/44	99A	CR

PFP SAFETY CLASS 2 SYSTEMS AND RELATED EQUIPMENT				
KEY: S-SEISMIC C-CRITICALITY E-ENVIRONMENTAL I-INDUSTRIAL SAFETY F-FIRE R-RADIATION PROTECTION O-OSD				
Component ID(s)	Description/Function	LOCATION/ ROOM	SYSTEM CODE(s)	PURPOSE CODE(S)
CADM-Z5-4A CADM-Z5-4B CADM-Z5-4C	Criticality Alarm Detector Modules in CAP-Z5	236-Z/44	99A	CR
CADM-Z5-5A CADM-Z5-5B CADM-Z5-5C	Criticality Alarm Detector Modules in CAP-Z5	236-Z/44	99A	CR
CADM-Z5-6A CADM-Z5-6B CADM-Z5-6C	Criticality Alarm Detector Modules in CAP-Z5	236-Z/44	99A	CR
CADM-Z5-7A CADM-Z5-7B CADM-Z5-7C	Criticality Alarm Detector Modules in CAP-Z5	236-Z/44	99A	CR
CAH-Z5-1 CAH-Z5-2 CAH-Z5-3 CAH-Z5-4 CAH-Z5-5 CAH-Z5-6 CAH-Z5-7 CAH-Z5-8 CAH-Z5-9 CAH-Z5-10 CAH-Z5-11 CAH-Z5-12 CAH-Z5-13 CAH-Z5-14 CAH-Z5-15 CAH-Z5-16 CAH-Z5-17 CAH-Z5-18 CAH-Z5-19 CAH-Z5-20 CAH-Z5-21	Criticality Alarm Horns for CAP-Z5	236-Z/60 236-Z/Stair 2 236-Z/50 236-Z/E Wall 236-Z/40 236-Z/41 236-Z/42 236-Z/Corr 47 236-Z/Stair 1 236-Z/46 236-Z/45 236-Z/Corr 31 236-Z/Corr 31 236-Z/12 236-Z/Corr 20 236-Z/Corr 21 236-Z/Corr 21 236-Z/Stair 2 236-Z/Corr 14 236-Z/Corr 10 236-Z/Corr 11	99A	CR

PFP SAFETY CLASS 2 SYSTEMS AND RELATED EQUIPMENT

KEY:S-SEISMIC C-CRITICALITY E-ENVIRONMENTAL
I-INDUSTRIAL SAFETY F-FIRE
R-RADIATION PROTECTION O-OSD

Component ID(s)	Description/Function	LOCATION/ ROOM	SYSTEM CODE(s)	PURPOSE CODE(S)
CALM-Z5-1 CALM-Z5-2 CALM-Z5-3 CALM-Z5-4	Criticality Alarm Logic Module in CAP-Z5	236-Z/44	99A	CR
CARM-Z5	Criticality Alarm Relay Module in CAP-Z5	236-Z/44	99A	CR
CBS-Z5-1	Central Battery System for CAP-Z5	236-Z/44	99A	CR
ZONE 6				
CAP-Z6	Criticality Alarm Panel Z6	236-Z/44	99A	CR
ASG-Z6	Audible Signal Generator in CAP-Z6	236-Z/44	99A	CR
CAD-Z6-1A, CAD-Z6-1B CAD-Z6-1C	Criticality Alarm Detectors (Gamma)	236-Z/13	99A	CR
CAD-Z6-2A, CAD-Z6-2B CAD-Z6-2C	Criticality Alarm Detectors (Gamma)	236-Z/Corr 14	99A	CR
CAD-Z6-3A, CAD-Z6-3B CAD-Z6-3C	Criticality Alarm Detectors (Gamma)	236-Z/19	99A	CR
CAD-Z6-4A, CAD-Z6-4B CAD-Z6-4C	Criticality Alarm Detectors (Gamma)	236-Z/Stair 1	99A	CR
CAD-Z6-5A, CAD-Z6-5B CAD-Z6-5C	Criticality Alarm Detectors (Gamma)	236-Z/Corr 20	99A	CR
CAD-Z6-6A, CAD-Z6-6B CAD-Z6-6C	Criticality Alarm Detectors (Gamma)	236-Z/Corr 21	99A	CR
CAD-Z6-7A, CAD-Z6-7B CAD-Z6-7C	Criticality Alarm Detectors (Gamma)	236-Z/Stair 2	99A	CR
CADM-Z6-1A CADM-Z6-1B CADM-Z6-1C	Criticality Alarm Detector Modules in CAP-Z6	236-Z/44	99A	CR

PFP SAFETY CLASS 2 SYSTEMS AND RELATED EQUIPMENT					
KEY:S-SEISMIC C-CRITICALITY E-ENVIRONMENTAL I-INDUSTRIAL SAFETY F-FIRE R-RADIATION PROTECTION O-OSD					
Component ID(s)	Description/Function	LOCATION/ ROOM	SYSTEM CODE(s)	PURPOSE CODE(S)	
CADM-Z6-2A CADM-Z6-2B CADM-Z6-2C	Criticality Alarm Detector Modules in CAP-Z6	236-Z/44	99A	CR	
CADM-Z6-3A CADM-Z6-3B CADM-Z6-3C	Criticality Alarm Detector Modules in CAP-Z6	236-Z/44	99A	CR	
CADM-Z6-4A CADM-Z6-4B CADM-Z6-4C	Criticality Alarm Detector Modules in CAP-Z6	236-Z/44	99A	CR	
CADM-Z6-5A CADM-Z6-5B CADM-Z6-5C	Criticality Alarm Detector Modules in CAP-Z6	236-Z/44	99A	CR	
CADM-Z6-6A CADM-Z6-6B CADM-Z6-6C	Criticality Alarm Detector Modules in CAP-Z6	236-Z/44	99A	CR	
CADM-Z6-7A CADM-Z6-7B CADM-Z6-7C	Criticality Alarm Detector Modules in CAP-Z6	236-Z/44	99A	CR	

PFP SAFETY CLASS 2 SYSTEMS AND RELATED EQUIPMENT				
KEY:S-SEISMIC C-CRITICALITY E-ENVIRONMENTAL I-INDUSTRIAL SAFETY F-FIRE R-RADIATION PROTECTION O-OSD				
Component ID(s)	Description/Function	LOCATION/ ROOM	SYSTEM CODE(s)	PURPOSE CODE(S)
CAH-Z6-1 CAH-Z6-2 CAH-Z6-3 CAH-Z6-4 CAH-Z6-5 CAH-Z6-6 CAH-Z6-7 CAH-Z6-8 CAH-Z6-9 CAH-Z6-10 CAH-Z6-11 CAH-Z6-12 CAH-Z6-13 CAH-Z6-14 CAH-Z6-15 CAH-Z6-16 CAH-Z6-17 CAH-Z6-18 CAH-Z6-19 CAH-Z6-20 CAH-Z6-21 CAH-Z6-22	Criticality Alarm Horns for CAP-Z6	236-Z/19 236-Z/18 236-Z/16 236-Z/Corr 14 236-Z/Stair 3 236-Z/26 236-Z/Corr 25 236-Z/26 236-Z/27 236-Z/12 236-Z/Corr 33 236-Z/Corr 33 236-Z/34 236-Z/35 236-Z/38 236-Z/Stair 1 236-Z/43 236-Z/Stair 3 236-Z/44 236-Z/47 236-Z/44 236-Z/19	99A	CR
CALM-Z6-1 CALM-Z6-2 CALM-Z6-3 CALM-Z6-4	Criticality Alarm Logic Module in CAP-Z6	236-Z/44	99A	CR
CARM-Z6	Criticality Alarm Relay Module in CAP-Z6	236-Z/44	99A	CR
CBS-Z6-1	Central Battery System for CAP-Z6	236-Z/44	99A	CR
Z6-K3	Master Intertie Relay in CAP-Z6	236-Z/44	99A	CR
Z6-K4	Master Intertie Relay in CAP-Z6	236-Z/44	99A	CR
ZONE 7				
CAP-Z7	Criticality Alarm Panel Z7	2736-ZA	99A	CR

PFP SAFETY CLASS 2 SYSTEMS AND RELATED EQUIPMENT KEY: S-SEISMIC C-CRITICALITY E-ENVIRONMENTAL I-INDUSTRIAL SAFETY F-FIRE R-RADIATION PROTECTION O-OSD				
Component ID(s)	Description/Function	LOCATION/ ROOM	SYSTEM CODE(S)	PURPOSE CODE(S)
ASG-Z7	Audible Signal Generator in CAP-Z7	2736-ZA	99A	CR
CAD-Z7-N1A CAD-Z7-N1B CAD-Z7-N1C	Criticality Alarm Detectors (Neutron)	2736-Z, Vault 1	99A	CR
CAD-Z7-N2A CAD-Z7-N2B CAD-Z7-N2C	Criticality Alarm Detectors (Neutron)	2736-Z, Vault 2	99A	CR
CAD-Z7-N3A CAD-Z7-N3B CAD-Z7-N3C	Criticality Alarm Detectors (Neutron)	2736-Z, Vault 3	99A	CR
CAD-Z7-N4A CAD-Z7-N4B CAD-Z7-N4C	Criticality Alarm Detectors (Neutron)	2736-Z, Vault 4	99A	CR
CAD-Z7-5A, CAN-Z7-5B, CAN-Z7-5C	Criticality Alarm Detectors (Gamma)	2736-Z, Corr	99A	CR
CMP-Z7-N1A CMP-Z7-N2A	Comparator Panels in CAP-Z7	2736-ZA	99A	CR
CADM-Z7-5A CADM-Z7-5B CADM-Z7-5C	Criticality Alarm Detection Modules in CAP-Z7	2736-ZA	99A	CR
CAF-1, CAF-2 CAF-3, CAF-4	Criticality Alarm Flasher Modules	2736-ZA	99A	CR

Component ID(s)	Description/Function	LOCATION/ ROOM	SYSTEM CODE(s)	PURPOSE CODE(S)
CAH-Z7-1 CAH-Z7-2 CAH-Z7-3 CAH-Z7-4 CAH-Z7-5 CAH-Z7-6 CAH-Z7-7 CAH-Z7-8 CAH-Z7-9 CAH-Z7-10 CAH-Z7-11 CAH-Z7-12 CAH-Z7-13 CAH-Z7-14 CAH-Z7-15 CAH-Z7-16	Criticality Alarm Horns for CAP-Z7	2736-Z/ Vlt 1 2736-Z/ Vlt 1 2736-Z/ Vlt 2 2736-Z/ Vlt 2 2736-Z/ Vlt 3 2736-Z/ Vlt 3 2736-Z/ Vlt 4 2736-Z/ Vlt 4 2736-Z/ Corr 2736-Z/ Corr 2736-Z/ N Wall 2736-Z/ N Wall 2736-Z/ S Roof 2736-Z/ S Roof 2736-ZA 2736-ZA	99A	CR
CALM-Z7-1	Criticality Alarm Logic Module in CAP-Z7	2736-ZA	99A	CR
CARM-Z7	Criticality Alarm Relay Module in CAP-Z7	2736-ZA	99A	CR
CBS-Z7	Central Battery System for CAP-Z7	2736-ZA	99A	CR
UPS-Z7	Uninterruptible Power Supply for CAP-Z7 Neutron Criticality Detection System	2736-ZA	99A	CR
Z7-K7	Master Inter tie Relay in CAP-Z7	2736-ZA	99A	CR
ZONE 8				
CAP-Z8	Criticality Alarm Panel Z8	241-Z	99A	CR
ASG-Z8	Audible Signal Generator for CAP-Z8	241-Z	99A	CR
CAD-Z8-1A, CAD-Z8-1B CAD-Z8-1C	Criticality Alarm Detectors (Gamma)	241-Z/Tank Room	99A	CR
CAD-Z8-2A, CAD-Z8-2B CAD-Z8-2C	Criticality Alarm Detectors (Gamma)	241-Z/Tank Room	99A	CR

PFP SAFETY CLASS 2 SYSTEMS AND RELATED EQUIPMENT				
KEY: S-SEISMIC C-CRITICALITY E-ENVIRONMENTAL I-INDUSTRIAL SAFETY F-FIRE R-RADIATION PROTECTION O-OSD				
Component ID(s)	Description/Function	LOCATION/ ROOM	SYSTEM CODE(s)	PURPOSE CODE(S)
CADM-Z8-1A CADM-Z8-1B CADM-Z8-1C	Criticality Alarm Detection Modules in CAP-Z8	241-Z	99A	CR
CADM-Z8-2A CADM-Z8-2B CADM-Z8-2C	Criticality Alarm Detection Modules in CAP-Z8	241-Z	99A	CR
CAH-Z8-1 CAH-Z8-2 CAH-Z8-3 CAH-Z8-4 CAH-Z8-5 CAH-Z8-6 CAH-Z8-7 CAH-Z8-8	Criticality Alarm Horns for CAP-Z8	241-Z/W Ext Wall 241-Z/W Ext Wall 241-Z/W Wall 241-Z/E Wall 241-Z/E Wall 241-Z/E Ext Wall 241-Z/E Ext Wall	99A	CR
CALM-Z8-1	Criticality Alarm Logic Module in CAP-Z8	241-Z	99A	CR
CARM-Z8	Criticality Alarm Relay Module in CAP-Z8	241-Z	99A	CR
CB5-Z8	Central Battery System for CAP-Z8	241-Z	99A	CR
ZONE 9				
CAP-Z9	Criticality Alarm Panel Z9	241-Z	99A	CR
ASG-Z9	Audible Signal Generator for CAP-Z9	2736-ZB/638	99A	CR
CAD-Z9-1A, CAD-Z9-1B CAD-Z9-1C	Criticality Alarm Detectors (Gamma)	2736-ZB/642	99A	CR
CAD-Z9-2A, CAD-Z9-2B CAD-Z9-2C	Criticality Alarm Detectors (Gamma)	2736-ZB/641	99A	CR
CAD-Z9-3A, CAD-Z9-3B CAD-Z9-3C	Criticality Alarm Detectors (Gamma)	2736-ZB/638	99A	CR
CAD-Z9-4A, CAD-Z9-4B CAD-Z9-4C	Criticality Alarm Detectors (Gamma)	2736-ZB/636	99A	CR

PFP SAFETY CLASS 2 SYSTEMS AND RELATED EQUIPMENT				
KEY:S-SEISMIC C-CRITICALITY E-ENVIRONMENTAL I-INDUSTRIAL SAFETY F-FIRE R-RADIATION PROTECTION O-OSD				
Component ID(s)	Description/Function	LOCATION/ ROOM	SYSTEM CODE(s)	PURPOSE CODE(S)
CAD-Z9-5A, CAD-Z9-5B CAD-Z9-5C	Criticality Alarm Detectors (Gamma)	2736-ZB/637	99A	CR
CADM-Z9-1A CADM-Z9-1B CADM-Z9-1C	Criticality Alarm Detection Modules in CAP-Z9	2736-ZB/638	99A	CR
CADM-Z9-2A CADM-Z9-2B CADM-Z9-2C	Criticality Alarm Detection Modules in CAP-Z9	2736-ZB/638	99A	CR
CADM-Z9-3A CADM-Z9-3B CADM-Z9-3C	Criticality Alarm Detection Modules in CAP-Z9	2736-ZB/638	99A	CR
CADM-Z9-4A CADM-Z9-4B CADM-Z9-4C	Criticality Alarm Detection Modules in CAP-Z9	2736-ZB/638	99A	CR
CADM-Z9-5A CADM-Z9-5B CADM-Z9-5C	Criticality Alarm Detection Modules in CAP-Z9	2736-ZB/638	99A	CR

PPF SAFETY CLASS 2 SYSTEMS AND RELATED EQUIPMENT

KEY:S-SEISMIC C-CRITICALITY E-ENVIRONMENTAL
I-INDUSTRIAL SAFETY F-FIRE
R-RADIATION PROTECTION O-OSD

Component ID(s)	Description/Function	LOCATION/ ROOM	SYSTEM CODE(s)	PURPOSE CODE(S)
CAH-Z9-1 CAH-Z9-2 CAH-Z9-3 CAH-Z9-4 CAH-Z9-5 CAH-Z9-6 CAH-Z9-7 CAH-Z9-8 CAH-Z9-9 CAH-Z9-10 CAH-Z9-11 CAH-Z9-12 CAH-Z9-13 CAH-Z9-14 CAH-Z9-15 CAH-Z9-16 CAH-Z9-17 CAH-Z9-18 CAH-Z9-19 CAH-Z9-20 CAH-Z9-21	Criticality Alarm Horns for CAP-Z9	2736-ZB/ 625 2736-ZB/ 625 2736-ZB/ 641 2736-ZB/ 641 2736-ZB/ 637 2736-ZB/ 622 2736-ZB/ 622 2736-ZB/ 600 2736-ZB/ 600 2736-ZB/602 2736ZB/602 2736-ZB/620 2736-ZB/620 2736-ZB/609 2736-ZB/609 2736-ZB/S Wall 2736-ZB/S Wall 2736-ZB/E Wall 2736-ZB/647 2736-ZB/648	99A	CR
CALM-Z9-1 CALM-Z9-2 CALM-Z9-3 CALM-Z9-4 CALM-Z9-5	Criticality Alarm Logic Modules in CAP-Z9	2736-ZB/638	99A	CR
CARM-Z9	Criticality Alarm Relay Module in CAP-Z9	2736-ZB/638	99A	CR
CBS-Z9	Central Battery System for CAP-Z9	2736-ZB/638	99A	CR
Z9-K2	Master Inter tie Relay in CAP-Z9	2736-ZB/638	99A	CR

Table 2.2: HEPA Filters Final Stage

System: HEPA Filters Final Stage		Justification: This equipment provides a defined contingency in the double contingency principle of nuclear criticality. Components whose failure could result in the loss of double contingency protection for an accidental nuclear criticality independent of dose consequences are Safety Class 1, WHC-SD-CP-SDD-005.		
PFP SAFETY CLASS 2 SYSTEMS AND RELATED EQUIPMENT				
KEY:S-SEISMIC C-CRITICALITY E-ENVIRONMENTAL I-INDUSTRIAL SAFETY F-FIRE R-RADIATION PROTECTION O-OSD				
Component ID(s)	Description/Function	LOCATION/ ROOM	SYSTEM CODE(s)	PURPOSE CODE(S)
HF-2, HF-4, HF-6	Final E-3/E-4 HEPA Filter for 232-Z Process Area	232-Z	25E	RE

Table 2.3: Effluent Stack Air Monitors and Alarms

System: Effluent Stack Air Monitors and Alarms	Justification: The Effluent Stack Monitors ensure that the release of alpha emitting radionuclides to the environment via the building exhaust stacks is continuously monitored and alarms are initiated if the release exceeds identified limits. WHC-SD-CP-SDD-006
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PFP SAFETY CLASS 2 SYSTEMS AND RELATED EQUIPMENT KEY: S-SEISMIC C-CRITICALITY E-ENVIRONMENTAL I-INDUSTRIAL SAFETY F-FIRE R-RADIATION PROTECTION O-OSD				
Component ID(s)	Description/Function	LOCATION/ ROOM	SYSTEM CODE(s)	PURPOSE CODE(S)
PROBE-CAM-Z14	CAM Sample Collection Probe	296-Z-14	24A	ER
SPLIT-CAM-Z14	CAM Sample Flow Splitter	296-Z-14	24A	ER
CAM-UPPER-Z14	Upper Alpha CAM	296-Z-14	24A	ER
FI-UPPER-Z14	Upper Alpha CAM Sample Flow Indicator	296-Z-14	24A	ER
FS-UPPER-Z14	Upper Alpha CAM Sample Flow Switch	296-Z-14	24A	ER
PI-UPPER-Z14	Upper Alpha CAM Vacuum Gauge	296-Z-14	24A	ER
FRC-UPPER-Z14	Upper Alpha CAM RAP-1 Flow Regulator	296-Z-14	24A	ER
CAM-LOWER-Z14	Lower Alpha CAM	296-Z-14	24A	ER
FI-LOWER-Z14	Lower Alpha CAM Sample Flow Indicator	296-Z-14	24A	ER
FS-LOWER-Z14	Lower Alpha CAM Sample Flow Switch	296-Z-14	24A	ER
PI-LOWER-Z14	Lower Alpha CAM Vacuum Gauge	296-Z-14	24A	ER
FRC-LOWER-Z14	Lower Alpha CAM RAP-1 Flow Regulator	296-Z-14	24A	ER
PNL-Z14	Local Alarm Annunciator Panel	296-Z-14	24A	ER
ANN-PNL-Z14_DS2	Low Alpha no. 1 Flow Alarm Annunciator	296-Z-14	24A	ER

PFP SAFETY CLASS 2 SYSTEMS AND RELATED EQUIPMENT				
KEY:S-SEISMIC C-CRITICALITY E-ENVIRONMENTAL I-INDUSTRIAL SAFETY F-FIRE R-RADIATION PROTECTION O-OSD				
Component ID(s)	Description/Function	LOCATION/ ROOM	SYSTEM CODE(S)	PURPOSE CODE(S)
ANN-PNL-Z14_DS3	Low Alpha no. 2 Flow Alarm Annunciator	296-Z-14	24A	ER
ANN-PNL-Z14_DS4	High Alpha no. 1 Rad Alarm Annunciator	296-Z-14	24A	ER
ANN-PNL-Z14_DS5	Alpha no. 1 Monitor Failure Alarm Annunciator	296-Z-14	24A	ER
ANN-PNL-Z14_DS6	High Alpha no. 2 Rad Alarm Annunciator	296-Z-14	24A	ER
ANN-PNL-Z14_DS7	Alpha no. 2 Monitor Failure Alarm Annunciator	296-Z-14	24A	ER
RESET-PNL-Z14	Local Alarm Annunciator Panel Reset/Silence Button	296-Z-14	24A	ER
ANN-CAM-221A_W18	221-A High Radiation/CAM Failure Alarm Annunciator Window	234-5Z/221A	24A	ER
ANN-PANEL-K_W60	321-A High Radiation/CAM Failure Alarm Annunciator Window	234-5Z/321A	24A	ER
ANN-CAM-631-9A	631 High Radiation/CAM Failure Alarm Annunciator Window	2736-ZB/631	24A	ER

Table 3.0: Safety Class 3 Systems and Related Equipment

PFP SAFETY CLASS 3 SYSTEMS AND RELATED EQUIPMENT					
KEY: S-SEISMIC C-CRITICALITY E-ENVIRONMENTAL I-INDUSTRIAL SAFETY F-FIRE R-RADIATION PROTECTION O-OSD					
SEL Ref. #	SAFETY SYSTEM/EQUIPMENT	JUSTIFICATION	LOCATION(s)	SYSTEM CODE(s)	PURPOSE CODE(S)
3.1	All Plutonium Gloveboxes and Open Faced Hoods		All	Multiple	CFR
3.2	Encasement for Piping Internal to Building		All	Multiple	IRE
3.3	Fixed Radiation Shielding		All	Multiple	RF
3.4	Flammable/Combustible/Hazardous Material Tanks, Containers & Cabinets		All	Multiple	IF
3.5	Mechanical Canning Machines		All	Multiple	O
3.6	Moving/Rotating Machinery & Equipment Guards		All	Multiple	I
3.7	Noise Abatement Devices		All	Multiple	I
3.8	Process Vessels and Tanks within Canyons and Gloveboxes	These tanks are used for various process purposes and may contain plutonium solution of various concentrations. The geometric configuration of these tanks is important in criticality control.	All	Multiple	C
3.9	Special Nuclear Material Scales	These scales are used primarily for accountability (Safeguards/Security Requirements) and secondarily for criticality control.	All	Multiple	C
3.10	Sump Alarms -HC-7C, HC-9B, HC-4, H-7A, H-9A, HC-227-S, HC-6 and HC-46F	These alarms provide an early indication of free liquid on the glovebox floor. There criticality based specifications that limit solution depth on glovebox floors.	234-5Z	Multiple	CR
3.11	Un-encased Chemical Piping External to Gloveboxes, Internal to Building		All	Multiple	IRE
3.12	Emergency Power Generators in 2721-Z and all related Controls, Transmitters, Interlocks, Alarm Panel and Distribution Equipment	None of the Safety Class 1 or 2 systems require emergency power to perform their functions.	2721-Z	12.B	IFE

PFP SAFETY CLASS 3 SYSTEMS AND RELATED EQUIPMENT KEY: S-SEISMIC C-CRITICALITY E-ENVIRONMENTAL I-INDUSTRIAL SAFETY F-FIRE R-RADIATION PROTECTION O-OSD					
SEL Ref. #	SAFETY SYSTEM/EQUIPMENT	JUSTIFICATION	LOCATION(s)	SYSTEM CODE(s)	PURPOSE CODE(S)
3.13	Ground Fault Interrupters		All	12.G	I
3.14	Plant Telephone System including Crash System Phones	See WHC-SD-CP-SDD-009 for Details.	All	15	CIRF
3.15	Public Address System (PAX Phones)	See WHC-SD-CP-SDD-009 for Details.	All	15	CIRF
3.16	Out of Service Propane Distributions Header		All	21	IF
3.17	Structures Not Listed as Safety Class 1 or 2	Combined releases from these facilities in the event of their failure does not pose an unacceptable on or off site risk. See WHC-SD-CP-SDD-007 for details.	All	21.C	SIFE
3.18	Main Building Steam Header Low Pressure Alarm System & Pressure Gages		234-5Z	22.A	RE
3.19	Steam Lines		All	22.A	I
3.20	17" Vacuum Service		All	23.A	IR
3.21	90lb Process Air System		All	23.P	I
3.22	Air Sample Vacuum and Instrument Air Compressor Primary Closed Loop Cooling System	See WHC-SD-CP-SDD-015 for Details.	291-Z 236-Z	23.F	RE
3.23	Dry Air Header Pressure Alarm/Controller System		234-5Z	23.D	F
3.24	Dry Air System		2736-ZB	23.D	ORI
3.25	Instrument Air System		All	23.J	IRE
3.26	Process Primary Closed Loop Cooling System	See WHC-SD-CP-SDD-015 for Details.	236-Z	23.F	REC
3.27	Process and Sanitary Water System		All	23.C 23.E	IE
3.28	Secondary Closed Loop Cooling System	See WHC-SD-CP-SDD-015 for Details.	243-ZB	23.F	E
3.29	241-Z Waste Tank Agitator		241-Z	24.B	OC

PFP SAFETY CLASS 3 SYSTEMS AND RELATED EQUIPMENT					
KEY:S-SEISMIC C-CRITICALITY E-ENVIRONMENTAL I-INDUSTRIAL SAFETY F-FIRE R-RADIATION PROTECTION O-OSD					
SEL Ref. #	SAFETY SYSTEM/EQUIPMENT	JUSTIFICATION	LOCATION(s)	SYSTEM CODE(s)	PURPOSE CODE(S)
3.30	Aqueous Makeup Catch Tank Alarm System		2735-Z	24.A	E
3.31	Encasement for Liquid Effluent Piping External to Building		All	24.A 72.P	IRE
3.32	Liquid Effluent Monitoring Equipment (Composite Sampler, Flow Meter, PH Meter, Recorders, Alarms, etc.)	This is an environmental monitoring point where compliance with hazardous and radiological regulations is necessary.	2904-ZB	24.A	RE
3.33	Low Level Waste Treatment System	Industrial Safety, ALARA, and potential release of radiological or hazardous chemicals to the environment. See WHC-SD-CP-SDD-018 for Details.	243-Z 243-ZA	24.L	ERIO
3.34	Un-encased Liquid Effluent Piping External to Building		All	24.A	IRE
3.35	Ventilation Instruments, Controls, Filters, Dampers, Valves, Interlocks and other devices not specifically listed as Safety Class 1 or 2.	The safety class 3 portion of the HVAC system defines the minimum requirements necessary to ensure ventilation airflow is from non-contaminated areas into areas of higher potential contamination within the facility and minimizes the uncontrolled contamination of facility workers. See WHC-SD-CP-SDD-005 for details.	All	25	SIFRE
3.36	Automatic Deluge System	See WHC-SD-CP-SDD-010 for Details.	234-5Z	26.A	RFE
3.37	Backflow Preventers in Sanitary Water System		All	26.E	I
3.38	Backflow Preventers in Protected Water System	Backflow of plutonium solution into the protected water system can result in a radiation hazard to plant personnel.	All	26.E	CE
3.39	Dry-Pipe Automatic Sprinkler System	See WHC-SD-CP-SDD-010 for Details.	234-5Z	26.A	RFE
3.40	Fire Hydrants	See WHC-SD-CP-SDD-010 for Details.	234-5Z 236-Z	26.A	RFE
3.41	HALON 1301 System	See WHC-SD-CP-SDD-010 for Details.	234-5Z	26.B	RFE
3.42	Portable Fire Extinguishers		All	26.A	RFE

PFP SAFETY CLASS 3 SYSTEMS AND RELATED EQUIPMENT KEY: S-SEISMIC C-CRITICALITY E-ENVIRONMENTAL I-INDUSTRIAL SAFETY F-FIRE R-RADIATION PROTECTION O-OSD					
SEL Ref. #	SAFETY SYSTEM/EQUIPMENT	JUSTIFICATION	LOCATION(s)	SYSTEM CODE(s)	PURPOSE CODE(S)
3.43	Wet-Pipe Automatic Sprinkler System	See WHC-SD-CP-SDD-010 for Details.	234-5Z 236-Z	26.A	RFE
3.44	Cranes, Hoists and Lifting Equipment		All	41.B	I
3.45	Scaffolds, Ladders		All	41.D	I
3.46	Centrifuge Safety Bar Interlocks		236-Z	71.E 71.K 72.J 72.K	I
3.47	Combustible Gas Analyzer Glovebox MT-4		236-Z	71.C	FI
3.48	Combustible Gas Monitor HA-40F		234-5Z	71.G	FI
3.49	Criticality Drains on Glovebox HC-1, HC-5, and HC-60	See WHC-SD-CP-SDD-008 for details on Safety Class 3 Criticality drains.	234-5Z	71.F 73.E	C
3.50	Emergency Shutdown Switch - HA-40F		234-5Z	71.G	CIRF
3.51	HA-40F Calciner Temperature Controllers/Recorder & Alarms		234-5Z	71.G	F
3.52	HA-40F Liquid Detector Alarm		234-5Z	71.G	CR
3.53	MT-5 Temperature Control, Alarm, and Interlock System	See WHC-SD-CP-SDD-002 for Details.	236-Z	71.D	FREI
3.54	Oxygen Analyzer Glovebox MT-4		236-Z	71.C	FI
3.55	S&C Dissolver Vacuum Level Indicator		236-Z	71.K	IF
3.56	S&C Dissolver Vent Rupture Disk, H-2-05596-79		236-Z	71.K	IF
3.57	S&C Dissolver Ball Valve N2 Purge System		236-Z	71.K	IR
3.58	S&C Ball Valve Charging Mechanism Key Operated Interlock		236-Z	71.K	IR
3.59	Tank 12A Safety Shield		236-Z	71.K	IR

PFP SAFETY CLASS 3 SYSTEMS AND RELATED EQUIPMENT					
KEY:S-SEISMIC C-CRITICALITY E-ENVIRONMENTAL I-INDUSTRIAL SAFETY F-FIRE R-RADIATION PROTECTION O-OSD					
SEL Ref. #	SAFETY SYSTEM/EQUIPMENT	JUSTIFICATION	LOCATION(s)	SYSTEM CODE(s)	PURPOSE CODE(S)
3.60	Temperature Control System, Glovebox HC-60		234-SZ	71.F	OIF
3.61	241-Z Waste Tank Weight Factor Instrumentation	These instruments provide data used to maintain the Pu loss material balance and satisfy the batch maximum Pu content being transferred to 244TX receiver tank. It plays a role in criticality control of 244TX but is not the controlling condition. Waste is primarily controlled by Pu concentration obtained by laboratory analysis of tank samples. Tank volume measurement is used to control total tank volume to prevent overfilling and spillage to the containment vault. These instruments play no role in onsite/offsite releases.	241-Z	72.P	OCE
3.62	CAW Waste Tank Transfer Key Operated Interlock	This key lock, administratively controlled by management, is the last barrier to the transfer of waste to tanks of unfavorable geometry. Failure to function would result in only the potential to transfer excessive plutonium to the 241-Z tanks. Other controls are in place to measure and control plutonium content.	236-Z	72.J 72.F	OC
3.63	Filtrate Evaporator Steam Condensate Conductivity Probe and Alarm	See WHC-SD-CP-SDD-012 for details.	236-Z	72.L	OC
3.64	Filtrate Evaporator Demister Differential Pressure Interlock, Condensate Diversion Valve & Alarm	See WHC-SD-CP-SDD-012 for details.	236-Z	72.L	OER
3.65	Pipe Routings from Tanks 19, 39, 40, and WM-1 to 241-Z	With maximum tank inventory spill coupled with unlimited water wash into the aquifer the ESHC would not exceed 500,000.	241-Z	72.J 72.F 72.P	CE
3.66	Product Concentrator/Filtrate Evaporator Steam Supply Reducer and Relief Valves	See WHC-SD-CP-SDD-012 for details.	236-Z	72.K 72.L	OI
3.67	Product Concentrator Steam Condensate Conductivity Probe & Alarm	See WHC-SD-CP-SDD-012 for details.	236-Z	72.K	OC

PFP SAFETY CLASS 3 SYSTEMS AND RELATED EQUIPMENT					
KEY:S-SEISMIC C-CRITICALITY E-ENVIRONMENTAL I-INDUSTRIAL SAFETY F-FIRE R-RADIATION PROTECTION O-OSD					
SEL Ref. #	SAFETY SYSTEM/EQUIPMENT	JUSTIFICATION	LOCATION(s)	SYSTEM CODE(s)	PURPOSE CODE(S)
3.68	Product Concentrator/Filtrate Evaporator Temperature Indicator/Recorder & Alarm Interlock	See WHC-SD-CP-SDD-012 for details.	236-Z	72.K 72.L	OI
3.69	RM 40 Chemical Make-up Tanks Liquid Level Indicators		236-Z	72.S	IE
3.70	RM 40 HNO ₃ & ANN Tanks High Level Interlock to Supply Pumps		236-Z	72.S	IE
3.71	Room 40 Carbon Tetrachloride Monitor		236-Z	72.S	I
3.72	Tank 50 Liquid Level Interlock to Process Vacuum System	See WHC-SD-CP-SDD-013 for details.	236-Z	72.M	OC
3.73	Tanks 36 & 120 Cooling Water Differential Pressure Alarm System		236-Z	72.C 72.H	E
3.74	Weight Factor Instrument Recorders and Controllers for Tanks 45, 46 and 128	See WHC-SD-CP-SDD-012 for details.	236-Z	72.K	OC
3.75	1st and 2nd Stage Calciner(s), HC-9B		234-5Z	73.D	SF
3.76	Calcliner Purge Air Low Flow Alarm, HC-9B		234-5Z	73.D	OR
3.77	Closed Circuit TV HC-9B	This unit monitors spillage from the RMC line VDF discharge chute. Its purpose is to provide an early indication of spillage that, if unchecked, could result in a criticality infraction. Normal line surveillance is the primary method to monitor this spill point. This unit has no effect on onsite/offsite releases.	234-5Z	73V	C
3.78	Emergency Shutdown Switch System - RMC Line		234-5Z	73.V	CIRF
3.79	H202 Addition Rate Timer System RMC Control Room		234-5Z	73.V	OR
3.80	HC-1 and HC-2 Conveyor Lockout Key Switches and Electric Relays		234-5Z	73.E 73.S	IR

PFP SAFETY CLASS 3 SYSTEMS AND RELATED EQUIPMENT					
KEY: S-SEISMIC C-CRITICALITY E-ENVIRONMENTAL I-INDUSTRIAL SAFETY F-FIRE R-RADIATION PROTECTION O-OSD					
SEL Ref. #	SAFETY SYSTEM/EQUIPMENT	JUSTIFICATION	LOCATION(s)	SYSTEM CODE(s)	PURPOSE CODE(S)
3.81	HC-21C Thermal Stabilization System	Furnace operation creates the possibility of releasing Halon, a Chloro-fluoro carbon (CFC), to the environment. Furnace operation can result in a potential butene deflagration from organic materials present in feed material. Also see WHC-SD-CP-SDD-017 for Details.	234-5Z Room 230A	73T	FEIO
3.82	HC-21C Glovebox CO ₂ Supply System	If butene gas is allowed to accumulate in the furnaces, the possibility for a deflagration exists. The inert CO ₂ gas lowers the butene concentration below the lower flammable limit.	234-5Z Room 230A	73T	FIO
3.83	HC-21C Glovebox Furnace Exhaust provided by 26" Process Vacuum System	If butene gas is allowed to accumulate in the furnaces, the possibility for a deflagration exists. The 26" vacuum system removes the butene and CO ₂ gas mixture to assure the butene concentration remains below the lower flammable limit.	234-5Z Room 230A	73T	FIO
3.84	HC-21C Glovebox Halon Abort Switch (HS-21C-A)	Allows operator to temporarily disable Halon system and stop Halon discharge to the environment when high glovebox temperatures from furnace operation have tripped the alarm but no fire in the glovebox exists.	234-5Z Room 230A	73T	FEO
3.85	HC-21C Glovebox Furnace Emergency Shutdown Switch (HS-21C-E)	Removes power from furnaces to stop a Halon discharge to the environment and/or butene deflagration.	234-5Z Room 230A	73T	FEIO
3.86	HC-21C Glovebox High Temperature Control System	Shuts off power to the furnaces when glovebox temperature exceeds limit in order to stop Halon discharge to the environment.	234-5Z Room 230A	73T	FEO
3.87	HC-21C Glovebox Furnace Temperature Control System	If butene gas is allowed to accumulate in the furnaces, the possibility for a deflagration exists. The temperature control system regulates the butene gas generation rate coupled with the ventilation system to assure the butene concentration remains below the lower flammable limit.	234-5Z Room 230A	73T	FIO

PFP SAFETY CLASS 3 SYSTEMS AND RELATED EQUIPMENT					
KEY: S-SEISMIC C-CRITICALITY E-ENVIRONMENTAL I-INDUSTRIAL SAFETY F-FIRE R-RADIATION PROTECTION O-OSD					
SEL Ref. #	SAFETY SYSTEM/EQUIPMENT	JUSTIFICATION	LOCATION(s)	SYSTEM CODE(s)	PURPOSE CODE(S)
3.88	High Level Alarm, Overflow Tank, HC-9B		234-5Z	73.D	OR
3.89	Pre-Reduction Tank (PRT) Agitator/H202 Interlock HC-7C		234-5Z	73.C	OIR
3.90	RMS 336/337 AMU Spill Basin Riser		234-5Z	73.U	IE
3.91	RMS 336/337 AMU Tank Liquid Level Indicators		234-5Z	73.U	IE
3.92	Vacuum Trap Alarm & Interlock System - HC-227-S, HC-4, HC-7	See WHC-SD-CP-SDD-013 for details.	234-5Z	73.A 73.B 73.C	OC
3.93	Cubicle Temperature Measurement System		2736-Z	74.A	O
3.94	IAEA Security Bars	These aluminum bars will only prevent unauthorized removal of stored items under IAEA management. They do not affect the storage array, the vault structure, or criticality analysis.	2736-Z	74.A	I
3.95	Primary PU Containers - (Confinement Containers Lard Cans & Others)	Potential for contamination spread within the plant.	All	74.A	COR
3.96	Cascade Bottle Breathing Air Supply		All	82	IR
3.97	Propane Fixed Bottle Stations		234-5Z	82	IF
3.98	Analytical Lab and PPSL Trouble Alarm System		234-5Z	85.A 86.A	IR
3.99	Continuous Air Monitor (CAM) on Filter Box 9AB	Loss of this alarm system would not effect the onsite/offsite release. The primary alarm point is the stack CAMs. This CAM is used for determining the source of the release, not for controlling the release. The CAM will also provide an indication of early filter failure. The CAM alarm does not stop the flow through this filter.	234-5Z	96	RE

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KEY:S-SEISMIC C-CRITICALITY E-ENVIRONMENTAL I-INDUSTRIAL SAFETY F-FIRE R-RADIATION PROTECTION O-OSD					
SEL Ref. #	SAFETY SYSTEM/EQUIPMENT	JUSTIFICATION	LOCATION(s)	SYSTEM CODE(s)	PURPOSE CODE(S)
3.100	Continuous Air Monitors (except those associated with SC = 1 and SC = 2 stacks), Portable and Fixed and Room Air Samplers	See WHC-SD-CP-SDD-011 for details.	All	96	R
3.101	Hand/Foot Counters		All	96	R
3.102	Emergency Evacuation Audible Alarm System (Sirens and Controllers)	See WHC-SD-CP-SDD-009 for Details.	All	99.C	CIRF
3.103	Emergency Lighting Systems including Battery Operated, Emergency Lights, and Incandescent Ceiling Mounted Lights	See WHC-SD-CP-SDD-009 for Details.	All	99.C	IF
3.104	Eye Wash Stations & Safety Showers		All	99	I
3.105	Uninterruptable Power Supply, Seismic Shutdown System	See WHC-SD-CP-SDD-004 for Details	Corridor 14	99.B	ISR
3.106	Uninterruptable Power Supplies, Criticality Alarm System (except for CAP-27 which is SC = 2, see table 2.1)	See WHC-SD-CP-SDD-003 for Details	All	99.A 12.E	CRI