2.6 HVAC Systems

2.6.1 Main Control Room Air Conditioning System

1.0 Description

The main control room air conditioning system (CRACS) supplies air to the control room envelope (CRE) area which includes the main control room (MCR) and associated rooms.

The CRACS controls the CRE area temperature and air change rate for personnel comfort, personnel safety, and equipment protection during normal plant operation. The CRACS provides cooling, heating, and ventilation for the CRE area to remove equipment heat, and heat generated from other sources. The CRACS also provides heat to maintain a minimum temperature in the CRE area. The CRACS provides a minimal air change rate for the CRE area and controls building pressurization to reduce spreading of contamination.

The CRACS maintains habitability of the CRE area in case of radioactive or toxic gas contamination of the environment. The CRACS also maintains a positive pressure in the CRE area to prevent infiltration of contaminated outside air. The CRACS operates in recirculation mode with fresh air makeup.

The CRACS provides the following safety-related functions:

- Maintains ambient temperature conditions inside the CRE area.
- Provides carbon filtration of outside air and recirculated air from within the CRE area.
- Maintains a positive pressure in the CRE area relative to the adjacent areas to prevent unfiltered in-leakage, upon receipt of a containment isolation signal (CIS) or high radiation alarm signal in the air intake ducts.

2.0 Arrangement

2.1 The functional arrangement of the CRACS is as shown on the following figures:

- Figure 2.6.1-1—Control Room Air Intake and CREF (Iodine Filtration) Train Subsystem Functional Arrangement.
- Figure 2.6.1-2—Control Room Air Conditioning and Recirculation Air Handling Subsystem Functional Arrangement.
- Figure 2.6.1-3—CRE Air Supply and Recirculation Subsystem Functional Arrangement.

2.2 The location of the CRACS equipment is as listed in Table 2.6.1-1—Main Control Room Air Conditioning System Equipment Mechanical Design.

2.3 Physical separation exists between the CRACS air intake, iodine filtration, air recirculation, and air conditioning trains.

3.0 Mechanical Design Features

3.1 Deleted.

3.2 Equipment listed in Table 2.6.1-1 can perform the function listed in Table 2.6.1-1 under system operating conditions.

3.3 Components identified as Seismic Category I in Table 2.6.1-1 can withstand seismic design basis loads without a loss of the function listed in Table 2.6.1-1.

3.4 Components listed in Table 2.6.1-1 as ASME AG-1 Code are designed in accordance with ASME AG-1 Code requirements.

3.5 Components listed in Table 2.6.1-1 as ASME AG-1 Code are fabricated in accordance with ASME AG-1 Code requirements, including welding requirements.

3.6 Components listed in Table 2.6.1-1 as ASME AG-1 Code are inspected and tested in accordance with ASME AG-1 Code requirements.

4.0 Displays and Controls

4.1 Displays listed in Table 2.6.1-2—Main Control Room Air Conditioning System Equipment I&C and Electrical Design, are retrievable in the main control room (MCR) and the remote shutdown station (RSS) as listed in Table 2.6.1-2.

4.2 The CRACS equipment controls are provided in the MCR and RSS as listed in Table 2.6.1-2.

4.3 Equipment listed as being controlled by a priority and actuator control system (PACS) module in Table 2.6.1-2 responds to the state requested by a test signal.

5.0 Electrical Power Design Features

5.1 The equipment designated as Class 1E in Table 2.6.1-2 are powered from the Class 1E division as listed in Table 2.6.1-2 in a normal or alternate feed condition.

5.2 Deleted.

6.0 Equipment and System Performance

6.1 The CRACS maintains a positive pressure in the CRE area relative to the outside environment and adjacent areas, while operating in a design basis accident alignment.

6.2 Upon receipt of a containment isolation signal (CIS), the iodine filtration train will start automatically, outside air supply to the CRE area is diverted through the iodine filtration train, a minimum recirculation flowrate is established from the CRE area to the iodine filtration train, and a positive pressure is maintained in the CRE area relative to the adjacent areas.

6.3 Deleted.

6.4 The CRE area ventilation unfiltered air in-leakage is minimized in order to maintain the MCR habitability.

6.5 The CRACS provides cooling and heating to maintain the design temperatures in the CRE area, while operating in a design basis accident alignment.

6.6 The CREF heaters protect the carbon adsorber from high humidity during operation of the CREF unit.

6.7 Upon receipt of a high radiation alarm signal in the air intake ducts, the iodine filtration train will start automatically, the outside air supply to the CRE area is diverted through the iodine filtration train, a minimum CRE recirculation flowrate is established from the CRE area to the iodine filtration train, and a positive pressure is maintained in the CRE area relative to the adjacent areas.

7.0 Inspections, Tests, Analyses and Acceptance Criteria

Table 2.6.1-3 lists the CRACS ITAAC.

Table 2.6.1-1—Main Control Room Air Conditioning System Equipment Mechanical Design
(6 Sheets)

Description	Tag Number (1)	Location	ASME AG-1 Code	Function	Seismic Category
Fresh Air Intake Trains 30SAB01 and 30SAB04					
Motor Operated Dampers	30SAB01AA002 30SAB04AA002 30SAB11AA001 30SAB11AA003 30SAB11AA004 30SAB14AA001 30SAB14AA003 30SAB14AA004	Safeguard Building 2 Safeguard Building 3	Yes	Open	I
Electric Heaters	30SAB01AH001 30SAB04AH001	Safeguard Building 2 Safeguard Building 3	Yes	On / Off (based on ambient conditions)	I
Motor Operated Dampers	30SAB01AA003 30SAB04AA003 30SAB01AA004 30SAB04AA004	Safeguard Building 2 Safeguard Building 3	Yes	Close	I
Prefilters	30SAB01AT001 30SAB04AT001	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I
Manual Dampers	30SAB01AA006 30SAB04AA006	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I
Motor Operated Dampers	30SAB01AA012 30SAB04AA012	Safeguard Building 2 Safeguard Building 3	Yes	Open	I

Table 2.6.1-1—Main Control Room Air Conditioning System Equipment Mechanical Design
(6 Sheets)

Description	Tag Number [1]	Location	ASME AG-1 Code	Function	Seismic Category
Iodine Filtration Trains 30SAB11 and 30SAB14					
Motor Operated Dampers (Recirculation from CRE)	30SAB11AA004 30SAB14AA004	Safeguard Building 2 Safeguard Building 3	Yes	Open	I
Motor Operated Dampers	30SAB11AA001 30SAB14AA001	Safeguard Building 2 Safeguard Building 3	Yes	Open	I
Electric Heaters	30SAB11AH001 30SAB14AH001	Safeguard Building 2 Safeguard Building 3	Yes	On / Off (based on ambient conditions)	I
Prefilters	30SAB11AT001 30SAB14AT001	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I
Upstream HEPA Filters	30SAB11AT002 30SAB14AT002	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I
Carbon Adsorbers	30SAB11AT003 30SAB14AT003	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I
Downstream HEPA Filters	30SAB11AT004 30SAB14AT004	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I
Motor Operated Damper	30SAB11AA003 30SAB14AA003	Safeguard Building 2 Safeguard Building 3	Yes	Open	I
Supply Air Fans	30SAB11AN001 30SAB14AN001	Safeguard Building 2 Safeguard Building 3	Yes	Run	I
Back draft Dampers	30SAB11AA002 30SAB14AA002	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I

Table 2.6.1-1—Main Control Room Air Conditioning System Equipment Mechanical Design
(6 Sheets)

Description	Tag Number (1)	Location	ASME AG-1 Code	Function	Seismic Category
Recirculation and Air Conditioning Trains 30SAB01 and 30SAB04					
Manual Dampers (recirculation from CRE)	30SAB01AA009 30SAB04AA009	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I
Manual Dampers (recirculation from CRE)	30SAB01AA010 30SAB04AA010	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I
Air Cooling Coils	30SAB01AC001 30SAB04AC001	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I
Moisture Separators	30SAB01AT004 30SAB04AT004	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I
Supply Air Fans	30SAB01AN001 30SAB04AN001	Safeguard Building 2 Safeguard Building 3	Yes	Run	I
HEPA Filters	30SAB01AT005 30SAB04AT005	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I
Back draft Dampers	30SAB01AA011 30SAB04AA011	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I
Recirculation and Air Conditioning Trains 30SAB02 and 30SAB03					
Manual Dampers (recirculation from CRE)	30SAB02AA009 30SAB03AA009	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I

Table 2.6.1-1—Main Control Room Air Conditioning System Equipment Mechanical Design
(6 Sheets)

Description	Tag Number (1)	Location	ASME AG-1 Code	Function	Seismic Category
Manual Dampers (recirculation from CRE)	30SAB02AA010 30SAB03AA010	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I
Air Cooling Coils	30SAB02AC001 30SAB03AC001	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I
Moisture Separators	30SAB02AT004 30SAB03AT004	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I
Supply Air Fans	30SAB02AN001 30SAB03AN001	Safeguard Building 2 Safeguard Building 3	Yes	Stop	I
HEPA Filters	30SAB02AT005 30SAB03AT005	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I
Backdraft Dampers	30SAB02AA011 30SAB03AA011	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I
Kitchen and Sanitary Exhaust 30SAB45					
Motor Operated Damper	30SAB45AA003	Safeguard Building 2	Yes	Close	I
Silencer	30SAB45BS001	Safeguard Building 2	Yes	N/A	I
Manual damper	30SAB45AA005	Safeguard Building 2	Yes	N/A	I
Exhaust fan	30SAB45AN001	Safeguard Building 2	Yes	Stop	I
Motor Operated Damper	30SAB45AA004	Safeguard Building 2	Yes	Close	I
Backdraft damper	30SAB45AA006	Safeguard Building 2	Yes	N/A	I

Table 2.6.1-1—Main Control Room Air Conditioning System Equipment Mechanical Design
(6 Sheets)

Description	Tag Number (1)	Location	ASME AG-1 Code	Function	Seismic Category
MCR Air Supply 30SAB32					
Manual Dampers	30SAB32AA001 30SAB32AA002 30SAB32AA003 30SAB32AA006 30SAB32AA013 30SAB32AA015 30SAB32AA017	Safeguard Building 2	Yes	N/A	I
Heaters	30SAB32AH001 30SAB32AH002 30SAB32AH003 30SAB32AH004 30SAB32AH005 30SAB32AH006 30SAB32AH007	Safeguard Building 2	Yes	On / Off (based on ambient conditions)	I
MCR Air Exhaust 30SAB42					
Motor Operated Dampers	30SAB42AA001 30SAB42AA002	Safeguard Building 2	Yes	Open	I

Table 2.6.1-1—Main Control Room Air Conditioning System Equipment Mechanical Design
(6 Sheets)

Description	Tag Number (1)	Location	ASME AG-1 Code	Function	Seismic Category
Manual Dampers	30SAB42AA006 30SAB42AA009 30SAB42AA011 30SAB42AA012 30SAB42AA014 30SAB42AA016	Safeguard Building 2	Yes	N/A	I

1) Equipment tag numbers are provided for information only and are not part of the certified design.

Table 2.6.1-2—Main Control Room Air Conditioning System Equipment I&C and Electrical Design (5 Sheets)

Description	Tag Number (1)	Location	IEEE Class 1E (2)	PACS	MCR / RSS Displays	MCR / RSS Controls
Fresh Air Intake Train 30SAB01						
Motor Operated Damper	30SAB01AA002	Safeguard Building 2	Division 4^N Division 3^A	Yes	Position / Position	Open-Close / Open-Close
Electric Heater	30SAB01AH001	Safeguard Building 2	Division 1^N	Yes	On-Off / On-Off	Start-Stop / Start-Stop
Motor Operated Damper	30SAB01AA003	Safeguard Building 2	Division 1^N Division 2^A	Yes	Position / Position	Open-Close / Open-Close
Motor Operated Damper	30SAB01AA012	Safeguard Building 2	Division 1^N Division 2^A	Yes	Position / Position	Open-Close / Open-Close
Motor Operated Damper	30SAB01AA004	Safeguard Building 2	Division 1^N Division 2^A	Yes	Position / Position	Open-Close / Open-Close
Fresh Air Intake Train 30SAB04						
Motor Operated Damper	30SAB04AA002	Safeguard Building 3	Division 1^N Division 2^A	Yes	Position / Position	Open-Close / Open-Close
Electric Heater	30SAB04AH001	Safeguard Building 3	Division 4^N	Yes	On-Off / On-Off	Start-Stop / Start-Stop
Motor Operated Damper	30SAB04AA003	Safeguard Building 2	Division 4^N Division 3^A	Yes	Position / Position	Open-Close / Open-Close
Motor Operated Damper	30SAB04AA012	Safeguard Building 3	Division 4^N Division 3^A	Yes	Position / Position	Open-Close / Open-Close
Motor Operated Damper	30SAB04AA004	Safeguard Building 3	Division 4^N Division 3^A	Yes	Position / Position	Open-Close / Open-Close

Table 2.6.1-2—Main Control Room Air Conditioning System Equipment I&C and Electrical Design (5 Sheets)

Description	Tag Number (1)	Location	IEEE Class 1E (2)	PACS	MCR / RSS Displays	MCR / RSS Controls
Iodine Filtration Train 30SAB11						
Motor Operated Damper (Recirculation from CRE)	30SAB11AA004	Safeguard Building 2	Division 1^N Division 2^A	Yes	Position / Position	Open-Close / Open-Close
Motor Operated Damper	30SAB11AA001	Safeguard Building 2	Division 1^N Division 2^A	Yes	Position / Position	Open-Close / Open-Close
Electric Heater	30SAB11AH001	Safeguard Building 2	Division 1^N Division 2^A	Yes	On-Off / On-Off	Start-Stop / Start-Stop
Motor Operated Damper	30SAB11AA003	Safeguard Building 2	Division 1^N Division 2^A	Yes	Position / Position	Open-Close / Open-Close
Supply Air Fan	30SAB11AN001	Safeguard Building 2	Division 1^N Division 2^A	Yes	On-Off / On-Off	Run-Stop / Run-Stop
Iodine Filtration Train 30SAB14						
Motor Operated Damper (Recirculation from CRE)	30SAB14AA004	Safeguard Building 3	Division 4^N Division 3^A	Yes	Position / Position	Open-Close / Open-Close
Motor Operated Damper	30SAB14AA001	Safeguard Building 3	Division 4^N Division 3^A	Yes	Position / Position	Open-Close / Open-Close
Electric Heater	30SAB14AH001	Safeguard Building 3	Division 4^N Division 3^A	Yes	On-Off / On-Off	Start-Stop / Start-Stop

Table 2.6.1-2—Main Control Room Air Conditioning System Equipment I&C and Electrical Design (5 Sheets)

Description	Tag Number (1)	Location	IEEE Class 1E (2)	PACS	MCR / RSS Displays	MCR / RSS Controls
Motor Operated Damper	30SAB14AA003	Safeguard Building 2	Division 4^N Division 3^A	Yes	Position / Position	Open-Close / Open-Close
Supply Air Fan	30SAB14AN001	Safeguard Building 3	Division 4^N Division 3^A	Yes	On-Off / On-Off	Run-Stop / Run-Stop
Recirculation and Air Conditioning Train 30SAB01						
Supply Air Fan	30SAB01AN001	Safeguard Building 2	Division 1^N Division 2^A	Yes	On-Off / On-Off	Run-Stop / Run-Stop
Recirculation and Air Conditioning Train 30SAB02						
Supply Air Fan	30SAB02AN001	Safeguard Building 2	Division 2^N	Yes	On-Off / On-Off	Run-Stop / Run-Stop
Recirculation and Air Conditioning Train 30SAB03						
Supply Air Fan	30SAB03AN001	Safeguard Building 3	Division 3^N	Yes	On-Off / On-Off	Run-Stop / Run-Stop
Recirculation and Air Conditioning Train 30SAB04						
Supply Air Fan	30SAB04AN001	Safeguard Building 3	Division 4^N Division 3^A	Yes	On-Off / On-Off	Run-Stop / Run-Stop
Kitchen and Sanitary Exhaust 30SAB45						
Motor Operated Damper	30SAB45AA003	Safeguard Building 2	Division 1^N Division 2^A	Yes	Position / Position	Open-Close / Open-Close

Table 2.6.1-2—Main Control Room Air Conditioning System Equipment I&C and Electrical Design (5 Sheets)

Description	Tag Number (1)	Location	IEEE Class 1E (2)	PACS	MCR / RSS Displays	MCR / RSS Controls
Motor Operated Damper	30SAB45AA004	Safeguard Building 2	Division 4^N Division 3^A	Yes	Position / Position	Open-Close / Open-Close
MCR Air Exhaust 30SAB42						
Motor Operated Damper	30SAB42AA001	Safeguard Building 2	Division 1^N Division 2^A	Yes	Position / Position	Open-Close / Open-Close
Motor Operated Damper	30SAB42AA002	Safeguard Building 2	Division 4^N Division 3^A	Yes	Position / Position	Open-Close / Open-Close
Instruments						
Differential Pressure across 30SAB11 Iodine Train Filters	30SAB11CP001	Safeguard Building 2	N/A	N/A	Press / Press	N/A
Differential Pressure across 30SAB14 Iodine Train Filters	30SAB14CP001	Safeguard Building 3	N/A	N/A	Press / Press	N/A
Differential Pressure between Main Control Room and Adjacent Rooms	30SAB32CP001 30SAB32CP002 30SAB32CP003	Safeguard Building 2	N/A	N/A	Press / Press	N/A
Iodine Filtration Train Flow	30SAB11CF001 30SAB14CF001	Safeguard Building 2 Safeguard Building 3	N/A	N/A	Flow / Flow	N/A

Table 2.6.1-2—Main Control Room Air Conditioning System Equipment I&C and Electrical Design (5 Sheets)

Description	Tag Number (1)	Location	IEEE Class 1E (2)	PACS	MCR / RSS Displays	MCR / RSS Controls
Protective Switch-off Temperature for Electric Heaters	30SAB01CT002 30SAB04CT002	Safeguard Building 2 Safeguard Building 3	N/A	N/A	Temp / Temp	N/A
Temperature Downstream of Electric Heaters	30SAB01CT003/004 30SAB04CT003/004	Safeguard Building 2 Safeguard Building 3	N/A	N/A	Temp / Temp	N/A
Main Control Room Temperature	30SAB32CT002 30SAB32CT003	Safeguard Building 2	N/A	N/A	Temp / Temp	N/A
Temperature Downstream of Iodine Train Heaters	30SAB11CT002 30SAB14CT002	Safeguard Building 2 Safeguard Building 3	N/A	N/A	Temp / Temp	N/A
Temperature Upstream of Iodine Train Heaters	30SAB11CT003 30SAB14CT003	Safeguard Building 2 Safeguard Building 3	N/A	N/A	Temp / Temp	N/A

1) Equipment tag numbers are provided for information only and are not part of the certified design.

2) ^{N} denotes division the component is normally powered from, while ^{A} denotes division the component is powered from when alternate feed is implemented.

Table 2.6.1-3—Main Control Room Air Conditioning System ITAAC (7 Sheets)

Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
2.1	The functional arrangement of the CRACS is as shown on Figures 2.6.1-1 through 2.6.1-3.	Inspections of the as-built system will be conducted.	The as-built CRACS conforms to the functional arrangement as shown on Figures 2.6.1-1 through 2.6.1-3.
2.2	The location of the CRACS equipment is as listed in Table 2.6.1-1.	An inspection will be performed of the location of the equipment listed in Table 2.6.1-1.	The equipment listed in Table 2.6.1-1 is located as listed in Table 2.6.1-1.
2.3	Physical separation exists between the CRACS air intake, iodine filtration, air recirculation, and air conditioning trains.	An inspection will be performed to verify that CRACS air intake, iodine filtration, air recirculation, air conditioning trains are located in separate rooms.	• The CRACS fresh air intake train 30SAB01, iodine filtration train 30SAB11, recirculation and air conditioning train 30SAB01 listed in Table 2.6.1-1 are located in room 2UJK31034 of Safeguard Building Division 2. • The CRACS fresh air intake train 30SAB04, iodine filtration train 30SAB14, recirculation and air conditioning train 30SAB04 listed in Table 2.6.1-1 are located in room 2UJK31034 of Safeguard Building Division 3. • The CRACS recirculation and air conditioning train 30SAB02 listed in Table 2.6.1-1 is located in room 2UJK31035 of Safeguard Building Division 2. • The CRACS recirculation and air conditioning train 30SAB03 listed in Table 2.6.1-1 is located in room 2UJK31035 of Safeguard Building Division 3.
3.1	Deleted.	Deleted.	Deleted.

Table 2.6.1-3—Main Control Room Air Conditioning System ITAAC (7 Sheets)

Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
3.2	Equipment listed in Table 2.6.1-1can perform the function listed in Table 2.6.1-1 under system operating conditions.	Tests will be performed.	Equipment listed in Table 2.6.1-1 performs the function listed in the table under system operating conditions.
3.3	Components identified as Seismic Category I in Table 2.6.1-1 can withstand seismic design basis loads without a loss of the function listed in Table 2.6.1-1.	a. Type tests, analyses, or a combination of type tests and analyses will be performed on the components identified as Seismic Category I in Table 2.6.1-1 using analytical assumptions, or under conditions, which bound the Seismic Category I design requirements. b. Inspections will be performed of the Seismic Category I components identified in Table 2.6.1-1 to verify that the components, including anchorage, are installed as specified on the construction drawings and deviations have been reconciled to the seismic qualification reports (SQDP, EQDP, or analyses).	a. Seismic qualification reports (SQDP, EQDP, or analyses) exist and conclude that the Seismic Category I components identified in Table 2.6.1-1 can withstand seismic design basis loads without a loss of the function listed in Table 2.6.1-1 including the time required to perform the listed function. b. Inspection reports exist and conclude that the Seismic Category I components identified in Table 2.6.1-1, including anchorage, are installed as specified on the construction drawings and deviations have been reconciled to the seismic qualification reports (SQDP, EQDP, or analyses).
3.4	Components listed in Table 2.6.1-1 as ASME AG-1 Code are designed in accordance with ASME AG-1 Code requirements.	Inspections will be performed for the existence of ASME AG-1 Code Design Verification Reports.	ASME AG-1 Code Design Verification Reports (AA-4400) exist for components listed as ASME AG-1 Code in Table 2.6.1-1.

Table 2.6.1-3—Main Control Room Air Conditioning System ITAAC (7 Sheets)

Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
3.5	Components listed in Table 2.6.1-1 as ASME AG-1 Code are fabricated in accordance with ASME AG-1 Code requirements, including welding requirements.	Inspections will be performed to verify components are fabricated in accordance with ASME AG-1 Code requirements.	For components listed as ASME AG-1 Code in Table 2.6.1-1, reports exist and conclude that the component meets ASME AG-1 Code requirements, including welding requirements.
3.6	Components listed in Table 2.6.1-1 as ASME AG-1 Code are inspected and tested in accordance with ASME AG-1 Code requirements.	Inspections and tests will be performed on the components.	For components listed as ASME AG-1 Code in Table 2.6.1-1, reports exist and conclude that the component meets ASME AG-1 Code inspection and testing requirements.
4.1	Displays listed in Table 2.6.1-2 are retrievable in the MCR and the remote shutdown station (RSS) as listed in Table 2.6.1-2.	a. Tests will be performed for the retrieve-ability of the displays in the MCR as listed in Table 2.6.1-2. b. Tests will be performed for the retrieve-ability of the displays in the RSS as listed in Table 2.6.1-2.	a. The displays listed in Table 2.6.1-2 as being retrieved in the MCR can be retrieved in the MCR. b. The displays listed in Table 2.6.1-2 as being retrieved in the RSS can be retrieved in the RSS.
4.2	Controls exist in the MCR and the RSS as identified in Table 2.6.1-2.	a. Tests will be performed for the existence of control signals from the MCR to the equipment listed in Table 2.6.1-2. b. Tests will be performed for the existence of control signals from the RSS to the equipment listed in Table 2.6.1-2.	a. The controls listed in Table 2.6.1-2 as being in the MCR exist in the MCR. b. The controls listed in Table 2.6.1-2 as being in the RSS exist in the RSS.
4.3	Equipment listed as being controlled by a PACS module in Table 2.6.1-2 responds to the state requested by a test signal.	A test will be performed using a test signal.	Equipment listed as being controlled by a PACS module in Table 2.6.1-2 responds to the state requested by a test signal.

Table 2.6.1-3—Main Control Room Air Conditioning System ITAAC (7 Sheets)

Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
5.1	The components designated as Class 1E in Table 2.6.1-2 are powered from the Class 1E division as listed in Table 2.6.1-2 in a normal or alternate feed condition.	a. Testing will be performed for the components designated as Class 1E in Table 2.6.1-2 by providing a test signal in each normally aligned division. b. Testing will be performed for the components designated as Class 1E in Table 2.6.1-2 by providing a test signal in each division with the alternate feed aligned to the divisional pair.	a. The test signal provided in the normally aligned division is present at the respective Class 1E component identified in Table 2.6.1-2. b. The test signal provided in each division with the alternate feed aligned to the divisional pair is present at the respective Class 1E component identified in Table 2.6.1-2.
5.2	Deleted.	Deleted.	Deleted.
6.1	The CRACS maintains a positive pressure in the CRE area relative to the outside environment and adjacent areas, while operating in a design basis accident alignment.	A tests will be performed to verify that the CRACS maintains a positive pressure in the CRE area relative to the outside environment and adjacent areas, while operating in a design basis accident alignment.	The test confirms that the CRACS maintains a positive pressure of greater than or equal to 0.125 inches water gauge in the CRE area relative to the outside environment and adjacent areas, while operating in a design basis accident alignment.

Table 2.6.1-3—Main Control Room Air Conditioning System ITAAC (7 Sheets)

Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
6.2	Upon receipt of a containment isolation signal, the iodine filtration train will start automatically, outside air supply to the CRE area is diverted through the iodine filtration train, a minimum recirculation flowrate is established from the CRE area to the iodine filtration train and a positive pressure is maintained in the CRE area relative to the adjacent areas.	a. A test will be performed to verify, upon receipt of a containment isolation test signal, that the iodine filtration train will start automatically; and the outside air supply to the CRE area is diverted through the iodine filtration train. A test will be performed separately for each iodine filtration train. b. A test will be performed to verify, upon receipt of a containment isolation test signal, that a minimum recirculation flowrate is established from the CRE area to the iodine filtration train. A test will be performed separately for each iodine filtration train. c. A test will be performed to verify, upon receipt of a containment isolation test signal, that the CRACS maintains a positive pressure in the CRE area relative to the adjacent areas.	a. A separate test for each iodine filtration train confirms, upon receipt of a containment isolation test signal, that the iodine filtration train will start automatically within 60 seconds; and the outside air supply to the CRE area is diverted through the iodine filtration train. b. A separate test for each iodine filtration train confirms, upon receipt of a containment isolation test signal, that a recirculation flowrate of greater than or equal to 3000 scfm is established from the CRE area to the iodine filtration train. c. A test confirms, upon receipt of a containment isolation test signal, that the CRACS maintains the pressure greater than or equal to 0.125 inches water gauge in the CRE area relative to the adjacent areas.
6.3	Deleted.	Deleted.	Deleted.
6.4	The CRE area ventilation unfiltered air in-leakage is minimized in order to maintain the MCR habitability.	A test will be performed to measure the unfiltered air in-leakage inside the CRE area boundary.	The test confirms that the unfiltered air in-leakage inside the CRE area boundary is less than or equal to 40 scfm.

Table 2.6.1-3—Main Control Room Air Conditioning System ITAAC (7 Sheets)

Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
6.5	The CRACS provides cooling and heating to maintain the design temperatures in the CRE area, while operating in a design basis accident alignment.	a. An inspection of the manufacturer's documentation of the CRACS cooling coils and inlet air electric heaters will be performed.	a. A report confirms that each CRACS cooling coil is capable of providing design cooling capacity, while operating in a design basis accident alignment. A report confirms that each CRACS air inlet heater is capable of providing design heating capacity, while operating in a design basis accident alignment.
		b. Tests and analyses of the CRACS will be performed to verify that design temperatures can be maintained in the CRE area, while operating in a design basis accident alignment.	b. A report confirms that the CRACS is capable of providing conditioned air to maintain design temperatures in the CRE area, while operating in a design basis accident alignment. A report confirms that each CRACS fan is capable of meeting the design air flow requirements, while operating in a design basis accident alignment.
6.6	The CREF heaters protect the carbon adsorber from high humidity during operation of the CREF unit.	a. An inspection of the manufacturer's documentation of the CREF heaters will be performed.	a. A report confirms that each CREF electric heater is capable of providing design heating capacity during operation of the CREF unit.
		b. Tests and analyses of the CREF heaters will be performed to verify that the CREF heaters functions as designed.	b. A report confirms that during operation of the CREF unit the CREF heater can provide the design KW heating capacity.

Table 2.6.1-3—Main Control Room Air Conditioning System ITAAC (7 Sheets)

Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
6.7	Upon receipt of a high radiation alarm signal in the air intake duct, the iodine filtration train will start automatically, the outside air supply to the CRE area is diverted through the iodine filtration train, a minimum CRE recirculation flowrate is established from the CRE area to the iodine filtration train, and a positive pressure is maintained in the CRE area relative to the adjacent areas.	a. A test will be performed to verify, upon receipt of high radiation alarm test signal in the air intake duct, that the iodine filtration train will start automatically; and the outside air supply to the CRE area is diverted through the iodine filtration train. A test will be performed separately for each iodine filtration train.	a. A separate test for each iodine filtration train confirms, upon receipt of high radiation alarm test signal in the air intake duct (KLK65CR001/002 and KLK66CR001/002), that the iodine filtration train will start automatically within 60 seconds, and the outside air supply is diverted through the iodine filtration train.
		b. A test will be performed to verify, upon receipt of high radiation alarm test signal in the air intake duct, that a minimum CRE recirculation flowrate for each iodine filtration train is achieved. A test will be performed separately for each iodine filtration train.	b. A separate test for each iodine filtration train confirms, upon receipt of high radiation alarm test signal in the air intake duct, that a CRE recirculation flowrate of greater than or equal to 3,000 scfm is established from the CRE area to the iodine filtration train.
		c. A test will be performed to verify, upon receipt of high radiation alarm test signal in the air intake duct, that a positive pressure is maintained in the CRE area relative to the adjacent areas.	c. A test confirms, upon receipt of high radiation alarm test signal in the air intake duct, that a positive pressure of greater than or equal to 0.125 inches water gauge is maintained in the CRE area relative to the adjacent areas.

Next File