

## 2.6.10 Radioactive Waste Processing Building Ventilation System

### Design Description

#### 1.0 System Description

The radioactive waste processing building ventilation system (RWBVS) provides fresh conditioned air to the Radioactive Waste Processing Building (RWB) to maintain acceptable ambient conditions within the building. The RWBVS provides filtration of exhaust from the RWB to limit the release of airborne contaminants exhausted from the vent stack.

The RWBVS provides the following non-safety related functions:

- Closes RWBVS room exhaust air normal carbon bypass isolation dampers
- Opens RWBVS carbon filtration unit isolation dampers and diverts the ventilation air flow through the RWBVS carbon filtration unit before exhausting to the vent stack on a high radiation signal from the radiation monitors (R-20, R-22).

#### 2.0 Arrangement

2.1 The functional arrangement of the RWBVS is as described in the Design Description of Section 2.6.10 and Table 2.6.10-1—Radioactive Waste Processing Building Ventilation System Equipment I&C and Electrical Design.

#### 3.0 I&C Design Features, Displays, and Controls

3.1 Displays listed in Table 2.6.10-1 are indicated on the PICS operator workstations in the main control room (MCR).

#### 4.0 Equipment and System Performance

4.1 Upon receipt of a high radioactivity signal from the radiation monitors (R-20, R-22), the RWBVS closes room exhaust air normal carbon bypass isolation dampers, opens RWBVS carbon filtration unit isolation dampers, and diverts the ventilation air flow through the RWBVS carbon filtration unit before exhausting to the vent stack.

### Inspections, Tests, Analyses, and Acceptance Criteria

Table 2.6.10-2 lists the RWBVS ITAAC.

**Table 2.6.10-1—RWBVS Equipment I&C and Electrical Design**

| <b>Description</b>        | <b>Tag Number<sup>(1)</sup></b> | <b>Location</b>                       | <b>MCR Displays</b> |
|---------------------------|---------------------------------|---------------------------------------|---------------------|
| Radiation Monitors (R-20) | 30KLK50CR031<br>30KLK50CR071    | Radioactive Waste Processing Building | Radioactivity level |
| Radiation Monitors (R-22) | 30KLK52CR031<br>30KLK52CR071    | Radioactive Waste Processing Building | Radioactivity level |
| Radiation Monitors (R-23) | 30KLK53CR031                    | Radioactive Waste Processing Building | Radioactivity level |
| Radiation Monitors (R-24) | 30KLK54CR031                    | Radioactive Waste Processing Building | Radioactivity level |

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

**Table 2.6.10-2—Radioactive Waste Processing Building Ventilation System  
ITAAC**

|     | <b>Commitment Wording</b>  | <b>Inspections, Tests, Analyses</b>   | <b>Acceptance Criteria</b>   |
|-----|--|---|--|
| 2.1 | The functional arrangement of the RWBVS is as described in the Design Description of Section 2.6.10 and Table 2.6.10-1.  | An inspection of the as-built RWBVS functional arrangement will be performed.   | The RWBVS conforms to the functional arrangement as described in the Design Description of Section 2.6.10 and Table 2.6.10-1.  |
| 3.1 | Displays listed in Table 2.6.10-1 are indicated on the PICS operator workstations in the MCR.  | Tests will be performed to verify that the displays listed in Table 2.6.10-1 are indicated on the PICS operator workstations in the MCR.  | Displays listed in Table 2.6.10-1 are indicated on the PICS operator workstations in the MCR.  |
| 4.1 | Upon receipt of a high radioactivity signal from the radiation monitors (R-20, R-22), the RWBVS closes room exhaust air normal carbon bypass isolation dampers, opens RWBVS carbon filtration unit isolation dampers, and diverts the ventilation air flow through the RWBVS carbon filtration unit before exhausting to the vent stack. | A test will be performed to verify that the RWBVS closes room exhaust air normal carbon bypass isolation dampers, opens RWBVS carbon filtration unit isolation dampers, and diverts the ventilation air flow through the RWBVS carbon filtration unit before exhausting to the vent stack upon receipt of a high radioactivity signal from the radiation monitors (R-20, R-22). | The RWBVS closes room exhaust air normal carbon bypass isolation dampers, opens RWBVS carbon filtration unit isolation dampers, and diverts the ventilation air flow through the RWBVS carbon filtration unit before exhausting to the vent stack upon receipt of a high radioactivity signal from the radiation monitors (R-20, R-22) using an established trip setpoint. |

**2.6.11 Smoke Confinement System**

There are no Tier 1 entries for this system.

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**2.6.12 Main Steam and Feedwater Valve Room Ventilation System**

There are no Tier 1 entries for this system.