

Criteria, Review, and Approach Document for the Assessment of Operational Readiness of Vital Safety Systems (VSS)

Reviewed by: _____ Date: _____

Site: LLNL

Facility: Plutonium Facility - Building 332

System: HEPA Filters

System Classification: Safety Class

System Safety Function: The safety function of the final two-stage HEPA filters is to remove radioactive particulates from the exhaust gas streams before the air is released to the environment. The final two-stage HEPA filters in each ventilation exhaust system are identified as safety-class structures, systems, and components (SCCs). (See Building 332 SAR, Section 4.3.4.1)

OBJECTIVE

VSS-1

This vital safety system is operational and personnel and processes are in place that ensures its continued operational readiness.

Criteria and Discussion of Results

VSS 1.1 VSS safety functions are defined and understood by responsible line managers, and supporting information/documentation is available and adequate. System testing is adequate to ensure operability. (See Review Approach items 1, 2, 3 and 7.)

Discussion of Results – (List information/documentation that was unavailable or inadequate. Indicate whether the criterion was met.)

Answer VSS 1.1

The VSS safety functions are defined in Chapter 4 of Building 332 SAR.

Answer VSS 1.1 (cont)

Line Managers are responsible for understanding the VSS safety functions. System responsible individuals are trained and tested to ensure their understanding of the safety functions.

Building 332 Facility Safety Plan (FSP), Facility Operating Procedures (FOPs), and system drawings provide supporting information and documentation on this VSS.

Building 332 SRPs and ACPs ensure operability of this vital safety system. In addition, daily inspections are used to ensure the operability of the VSS each working day.

The criteria for question VSS 1.1 were met.

VSS 1.2 The backlog for surveillances, tests, inspections, maintenance, repair, upgrades, or other work on the system is managed and kept to an appropriate minimum. (See Review Approach item 6.)

Discussion of Results – (Provide a discussion indicating whether the criterion was met.)

Answer VSS 1.2

There is no backlog associated with surveillances, tests, inspections, maintenance, or repairs on the final two-stage HEPA filters. However, work is under way to replace box filters with steel HEPA filter plenums. This work is part of the Work Smart Standards implementation plan.

The criteria for question VSS 1.2 were met for HEPA filter surveillances, tests, inspections, maintenance, repair, and upgrade projects. All elements are managed and work delay is kept to an appropriate minimum.

VSS 1.3 Configuration Management and Maintenance Programs effectively ensure operational availability of the system. (See Review Approach items 5, 8 and 9.)

Discussion of Results – (Address the maintenance program, document control, identification of system requirements and their bases, change control/work control, and assessments of the system. Indicate whether responsibility for operational readiness of this system is formally assigned.)

Answer VSS 1.3

Building 332 has a Work Control/Design Control Process that assures work activities are properly requested, reviewed, and authorized before being performed

Answer VSS 1.3 (cont)

and that work activities are performed in a formal and deliberate manner with an emphasis on safety. In addition, ACP-B332-011, *Unreviewed Safety Questions (USQ) Procedure* provides guidance for evaluating proposed activities for potential Unreviewed Safety Questions.

All procedures in the Plutonium Facility are prepared using QOP-B332-001, (Preparation of Controlled Procedures) and are reviewed, approved, and revised using QOP-B332-002 (Review, Approval and Revision of Unclassified Controlled Documents – Document Change Control Process). All controlled procedures in the Building 332 are reviewed every three years.

For the past two years, the Work Control Process has been used to control changes to systems in Building 332. This process applies to all facility and program modifications; requires engineering design reviews to be performed and as-built conditions to be confirmed prior to beginning work, and ensures the design basis is maintained. It also is the mechanism for triggering drawing updates. Prior to 1998, less vigorous configuration management existed in Building 332. The facility is gathering drawings and documentation for an archiving initiative.

Other than the weekly and annual monitoring and annual testing of the HEPA filters defined in Surveillance Requirement Procedures SRP-B332-001, SRP-B332-002, and SRP-B332-026, no other activities are performed on the final two-stage HEPA filters.

The criteria for question VSS 1.3 were met for configuration management and maintenance programs.

VSS 1.4 The system is operable and available to fulfill its safety function when required. (See Review Approach items 4 and 10).

Discussion of Results – (Provide a discussion indicating whether the criterion was met.)

Answer VSS 1.4

The HEPA filters are operable and available to fulfill their safety function when required. During the past three years, the HEPA filters have not failed their test acceptance criteria nor have they failed in response to facility operating conditions.

The criteria for question VSS 1.4 were met for system operability.