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

Directions: Complete an Assessment Form for each system assessed using the Review Approach provided. This assessment is intended to be conducted at the **system level**, and is only intended to consider **existing** information and processes (i.e., completion of the assessment does not require development of new or additional information). Where the requested information does not exist, it should be so noted in the Discussion of Results sections of the form. Provide this report to [Program Office Representative name at email address]. Sufficient information documenting the Review Approach should be retrievable for demonstrating the quality of the assessment and to support the conclusions reached, but do not submit the information with this form.

Site:

Facility:

System:

System Classification:

System Safety Function (list):

OBJECTIVE

VSS-1

This vital safety system is operational and personnel and processes are in place that ensure 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.)

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.)

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, work control, change control, document control, and assessments of the system. Include the identification and maintenance of system requirements and their associated basis information. Indicate whether responsibility for operational readiness of this system is formally assigned.)

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.)

Conclusion - (Summarize the results of the review and state whether the Objective was met. Identify any systemic, recurring, or significant issues or trends which require corrective action.)

DOE employee who reviewed this assessment:

Provide an estimate of the number of hours (contractor and DOE) needed to complete the data gathering, assessment, and documentation:

DOE:
Contractor:

Review Approach (Sufficient information documenting the Review Approach should be retrievable for demonstrating the quality of the assessment and to support the conclusions reached, but do not submit the information with this form.)

1. Using the DOE-approved facility safety analysis (i.e., SAR, BIO, etc.), identify: a) the system safety function(s); b) the normal, abnormal, and accident conditions under which the system is intended to perform its safety function(s); and c) relevant system functional requirements and performance criteria.

2. Identify the acceptance criteria from the surveillance tests used to verify that the system is capable of accomplishing its safety function(s). Review the acceptance criteria against the function(s), conditions, requirements, and performance criteria identified in Question 1 above.

3. At what frequency are the tests identified in Question 2 above performed? Determine whether these tests and inspections are required by Technical Safety Requirements, Operational Safety Requirements (OSRs), or other Authorization Basis or Authorization Agreement requirements.

4. For each of the past three years: a) identify the number of times that the system has failed to meet its test acceptance criteria; b) identify the number of times that the system has failed in response to facility operating conditions (i.e., failed on demand); and c) estimate the percentage of time that the system was not capable of accomplishing its safety function(s) when required to be operable.

5. Identify formally scheduled activities, in addition to those addressed in item 2 above, that are intended to help ensure reliable performance of the system. Include preventive maintenance, walkdowns, inspections, and assessments as appropriate.

6. Identify the current backlog for the system for items such as preventive maintenance, corrective maintenance, modifications, surveillances, tests, inspections, and corrective actions.

7. Are drawings that document the system configuration available? If so, identify the types of drawings (e.g., piping and instrumentation diagrams, electrical one-line, wiring, or schematic diagrams, installation drawings).

8. Review the application of processes used to ensure that work on the system and changes to the system are properly controlled (i.e., formally reviewed, approved, implemented, tested, USQ review performed if required, documents updated, and work/change accepted).

9. Determine whether the procedures identified in items 2 and 5 above, and the drawings identified in item 7 above, are controlled under a formal document control process, and indicate whether the process requires that documents be updated as necessary to maintain their accuracy.

10. Identify any systems and equipment (e.g., electric power, instrument or control air, diesel fuel transfer, vacuum, heat tracing, etc.) that directly support the operation of the vital safety system being assessed (i.e., where the support systems/equipment are essential for the safety system to perform its safety functions) that are not included within the defined system boundary.