

## **SAFETY BASIS (SB)**

### **OBJECTIVE**

**SB.1** Facility safety documentation is in place and has been implemented that describes the “safety envelope” of the facility. The safety documentation should characterize the hazards/risks associated with the facility and should identify preventive and mitigating measures (systems, procedures, administrative controls, etc.) that protect workers and the public from those hazards/risks. Safety structures, systems and components (SSCs) are defined and a system to maintain control over their designs and modification is established. (*Core Requirement 7*)

### **Criteria**

1. The TA-55 SST Facility safety basis and related documentation address the full spectrum of hazards/risks associated with operations.
2. Controls designed to mitigate the consequence of analyzed TA-55 SST Facility hazards, both safety SSCs and Specific Administrative Controls are clearly defined and detailed in safety basis documentation.
3. Installed safety SSCs are as described in the safety basis.

### **Approach**

**Record Reviews:** Review safety basis documentation to verify that the safety basis adequately addresses hazards and risks associated with TA-55 SST Facility operations. Verify that safety SSCs are consistent with their descriptions and performance assumed in the Interim Safety Basis (ISB) and pertinent support documents. Examine the LASO Safety Evaluation Report (SER), its Conditions of Approval, and applicable LASO technical direction to ensure that required actions are addressed.

**Performance Demonstration:** Visit the TA-55 SST Facility to validate that the ISB accurately describes the hazards that are present. Validate by inspection that the installed safety SSCs are as described in the ISB and pertinent support documents, except as may be documented and evaluated in accordance with the Unreviewed Safety Question (USQ) process.

**Personnel Interviews:** Interview TA-55 operations personnel to validate their understanding of the safety basis and controls established for TA-55 SST Facility operation.

### **OBJECTIVE**

**SB.2** A program is in place to confirm and periodically reconfirm the condition and operability of safety SSCs. This includes examinations of records of tests and calibration of these systems. The material condition of all safety, process, and utility systems will support safe conduct of work. (*Core Requirement 8*)

### **Criteria**

1. Documented evidence exists to ensure that constructed/installed safety SSCs have been inspected/tested, as appropriate, to ensure they comply with applicable design requirements as specified in the ISB.
2. Inspection procedures for in-service inspection requirements for safety SSCs (design

features) have been established to ensure the conditions of the safety SSCs continue to allow them to perform their safety functions consistent with the approved safety basis. *Note: The safety basis for the TA-55 SST Facility does not include any active safety SSCs with operability requirements.*

### **Approach**

**Record Reviews:** Review facility documentation to verify that requisite inspection and test activities have been properly executed and recorded.

Verify that designated inspections/tests are consistent with safety basis requirements.

**Personnel Interviews:** Interview facility personnel responsible for performing In-Service Inspections to validate they understand the breath of their responsibilities and demonstrate the ability to execute them.

### **OBJECTIVE**

**SB.3** The facility systems and procedures, as affected by facility modifications, are consistent with the description of the facility, procedures, and accident analysis included in the safety basis. *(Core Requirement 9)*

### **Criteria**

1. Administrative controls are in place to ensure that modifications to safety SSCs and procedures are adequately analyzed to identify and to ensure that design and operations changes are documented and approved prior to implementation.
2. Documented evidence exists to support that TA-55 SST modifications, if any, made in support of facility activities since approval of the current safety basis have been reviewed through the Applicability Screen for the Unreviewed Safety Question process.
3. Facility programs which support operation of the TA-55 SST, including operational procedures, work instructions and personnel training are upgraded and maintained consistent with approved modifications to safety SSCs and associated operating procedures.

### **Approach**

**Record Review:** Review engineering and work control documentation to verify that an effective configuration control process is established and that there are no uncontrolled modifications to safety SSCs. Verify that requirements are established to appropriately screen modifications to safety SSCs as required by the LANL USQ program.

**Personnel Interviews:** Interview facility personnel responsible for configuration management activities to validate their understanding of program requirements and responsibilities in regard to the TA-55 SST Facility safety basis.

### **OBJECTIVE**

**SB.4** Formal agreements between the LANL contractor and NNSA have been established via the contract or other enforceable mechanism to govern the safe operations of the facility. These requirements have been implemented in the facility, or compensatory measures are in place and formally agreed to during the period of implementation. The

compensatory measures and the implementation period are approved by NNSA. (*Core Requirement 14*)

#### Criteria

1. The facility Safety Basis, Authorization Agreement (or equivalent), and pertinent regulatory documentation appropriately authorize conduct of TA-55 SST Facility operations, and identify any compensatory measures required prior to or during operational activities.
2. Safety Basis controls have been appropriately translated into implementing documents and these controls are adequately implemented in the facility.
3. Surveillance procedures have been established to verify that administrative controls will be implemented as specified in the safety basis.

#### Approach

**Record Reviews:** Review safety basis documentation including the TA-55 SST Facility ISB and Authorization Agreement to confirm that appropriate approvals have been obtained from LASO.

**Review** the facility Safety Basis Implementation Plan and relevant facility procedures, operations orders and work instructions to confirm that upper tier safety basis controls are appropriately reflected in work control documents.

**Review** facility self assessments, Technical Safety Requirements (TSR) and other confirmatory documentation to verify that specified controls are adequately implemented

**Review** implementing procedures for specific administrative controls and required surveillances to verify they specify proper instructions for executing the administrative controls and required surveillances in accordance with the safety basis.

**Performance Demonstration:** Visit the TA-55 SST Facility and validate that physical aids necessary to implement specific administrative controls (e.g., speed limit signs) are installed.

**Personnel Interviews:** Interview operations personnel assigned to perform surveillances and execute specific administrative controls to verify they understand the breath of their responsibilities and demonstrate the ability to execute them.