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Subject: CONTROL OF PROCESSES	Approved: FEB 1 0 1989		

Approved by:

1/9/88 Appro

Yucca Mountain Project Leader

Date Approved by: Plot. John 12/15/88

Quality Assurance Manager

1.0 GENERAL REQUIREMENTS

The requirements of this section apply to engineered items and scientific investigations for process control. The requirements for special processes apply to engineered items only. Measures are established to assure that processes that affect quality of items or services are controlled either by instruction, procedures, or other appropriate means. Special processes that control or verify quality, such as those used in welding, heat treating, and nondestructive examination are accomplished by qualified personnel using qualified procedures in accordance with applicable codes, standards, specifications, criteria, and other special requirements.

2.0 PROCESS CONTROL

2.1 METHOD

All processes are controlled by instructions, procedures, drawings, checklists, travelers, or other appropriate means. These means assure that process parameters are controlled and that specified environmental conditions are maintained.

2.2 IDENTIFICATION OF SPECIAL PROCESSES

2.2.1 RESPONSIBILITY

Personnel designated responsibility for activities identify which portions of the activities involve the use of special processes. A special process is a process in which the results are highly dependent on either the control of the process or the operator's skill, or both, and in which the specified quality cannot be readily determined by inspection or testing of the item.

2.2.2 OUALIFICATION REQUIREMENTS

The necessary requirements for qualifications of personnel, procedures, or equipment are specified or referenced in the procedures or instructions either for processes that are not covered by existing codes and standards or for processes where the quality requirements for an item or test exceed those of existing codes or standards.

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2.2.3 CONDITIONS

Conditions necessary for accomplishment of the special process are included in procedures or instructions. These conditions include proper equipment, controlled parameters of the special process and calibration requirements.

2.2.4 APPLICABLE CODES AND STANDARDS

The requirements of applicable codes and standards, including acceptance criteria for the special process are specified or referenced in the procedures of instructions.

2.3 QUALIFICATION OF SPECIAL PROCESS PROCEDURES

2.3.1 PROGRAM FOR OUALIFICATION

Procedures are qualified in accordance with applicable codes, standards or other specifications. The program for qualification of procedures is specified in documents prepared by the cognizant technical organization. The responsible QA organization provides appropriate reviews to assure compliance with these requirements.

2.4 QUALIFICATION OF PERSONNEL PERFORMING SPECIAL PROCESSES

_.4.1 TRAINING, QUALIFICATION, AND CERTIFICATION

Personnel are trained, qualified, and certified in accordance with written procedures. The training and qualification, and certification are the responsibility of the LLNL-YMP. These procedures are reviewed by the Quality Assurance (QA) organization for compliance with requirements.

2.4.2 PROCEDURE

Qualification utilizes the actual working procedure, to the extent possible.

2.4.3 PERSONNEL QUALIFICATION REQUIREMENTS

Qualification of personnel incorporates the personnel qualification requirements of the applicable codes, standards, or specifications.

2.5 SPECIAL PROCESS EQUIPMENT

Special process equipment is checked out, qualified, and certified in accordance with specified requirements. These requirements implement the requirements of applicable codes, standards, and specifications. Equipment checkout, qualification, and certification are the responsibility of the LLNL-YMP. The QA organization reviews the procedures for qualification of equipment for compliance with requirements.

6 SPECIAL PROCESS RECORDS

Records are maintained for the currently qualified personnel, procedures, and equipment of each special process and the requirements for maintenance of these records are specified. Special process verification methods and criteria are documented and retained.