NUMBER: RSQM

RANCHO SECO QUALITY MANUAL

LEAD DEPARTMENT:
QUALITY & INDUSTRIAL SAFETY

Paul Bender 1-22-90 — 1/22/90

MANAGER, NUCLEAR QUALITY & INDUSTRIAL SAFETY / DATE — AGM, NUCLEAR / DATE

REVISION SUMMARY:

This change reflects Rev. 5 of Section I & IX and Revision 4 of all other sections.

Significant changes are,

QA Policy
- Revised to reflect the new Rancho Seco organization.

Section I
- Revised to reflect the new Rancho Seco Organization. Revision arrows have been omitted because of extensive revision.
- Annotated reference to OTA Program to be required as plant conditions dictate.
- Deleted reference to the Training Plan and Schedule.
- Clarified traning's responsibility to document training, not maintain training records.
- Deleted reference to "Information Services Manager" as that function has been transferred to SMUD Headquarters. (4.10.2) Renumbered sections.
- Deleted Sections 4.9f and 4.9g as these functions have been transferred to SMUD Headquarters. Renumbered following section.

Section II
- Added effluent control and environmental monitoring to the scope of the RSQM.

Section IV
- Changed Mgr. Nuclear Maintenance to Mgr., General Services.
- Added Section 5.2, Mgr., Tech Services responsibilities. Renumbered 5.2 to 5.3.

Section VII
- Deleted reference to CASE Registry which has been discontinued for Nuclear Utility Division.

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Section VIII	•	In 5.1, changes to indicate Mgr., General Services responsibilities.
Section IX	•	Deleted "trained and" in 4.3.
Section XIII	•	Clarified the need to identify the requirement for radiological controls on shipments of radioactive materials.
	•	Added General Services Mgr. responsibilities.
Section XVII	•	Added reference to Technical Specifications.
All Sections	•	All sections have been revised to reflect organizational changes made in Section I.

R A N C H O S E C O
Q U A L I T Y
M A N U A L

SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT

RANCHO SECO QUALITY MANUAL
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QUALITY ASSURANCE POLICY

The Sacramento Municipal Utility District's (SMUD) policy regarding Quality Assurance is as follows:

I. Organizations involved in safety related activities shall be structured, managed, and operated to provide compliance with this manual. Procedures and instructions shall be prepared to implement the activities required to provide direct support of the operation of Rancho Seco Nuclear Generating Station to achieve the following objectives:

   a. To comply with government regulations and established SMUD management policies and procedures, applying a systematic, disciplined and uniform approach to Quality Assurance.

   b. To perform assigned work correctly the first time.

   c. To provide facilities which are designed, modified, constructed, tested and operated in accordance with specified requirements, with assurance against failure or malfunctions, and without undue risks to the health and safety of the public.

   d. To ensure prompt identification and resolution of actual and potential problem areas in design, procurement, construction, testing, operations, maintenance and modification of safety related systems, structures and components.

II. Accountability for achieving the quality of structures, systems, components and services rests with the organizations and individuals performing the functions of design, construction, maintenance, modifications, and operations.

III. Accountability for determining that the structures, systems, components and services meet the stated requirements rests with the organizations and individuals performing quality verification functions, such as design review, document review, inspection, surveillance and audits.

The responsibility for development of the overall Rancho Seco Quality Program is delegated to the Manager, Nuclear Quality & Industrial Safety. He shall be responsible for assuring the adequacy, monitoring the implementation, effectiveness and status of the quality program. Any conflicts resulting from the implementation of the Quality Program which cannot be resolved by the Manager, Nuclear Quality & Industrial Safety shall be referred to the AGM, Nuclear for resolution.

P. BENDER
MANAGER, NUCLEAR QUALITY & SAFETY

1/22/90

D. KEUTER
AGM, NUCLEAR

I. ORGANIZATION

1.0 PURPOSE

This section describes the Sacramento Municipal Utility District (SMUD) Nuclear organizations and key personnel responsible for establishing, implementing, and verifying the effectiveness of the Quality Assurance Program to assure safe and reliable operation of the Rancho Seco Nuclear Generating Station.

2.0 REFERENCE DOCUMENTS

2.1 10CFR50, Appendix B, Criterion I, Organization

2.2 ANSI N45.2-1971, Section 2, Organization

2.3 Safety Guide 33/ANSI N18.7, Administrative Controls for Nuclear Power Plants

3.0 POLICY

3.1 SMUD acknowledges full responsibility for the establishment and implementation of the Rancho Seco Quality Program. Portions of the Quality Program functions may be delegated to other SMUD approved external organizations, but overall responsibility for the program is retained and exercised by SMUD.

3.2 Definitive lines of authority, responsibility and communication have been established for those organizations involved in the Rancho Seco Quality Program and are illustrated in the SMUD organizational charts. These lines extend from the highest management level through intermediate levels, to and including onsite organizational elements.

3.3 Quality Assurance personnel assigned to Rancho Seco have defined responsibilities and organizational freedom to identify problems that affect quality; to initiate, recommend, or provide solutions; and to verify implementation of solutions. They have the authority, with the concurrence of the Manager, Nuclear Quality and Industrial Safety or his designee, to initiate action to stop unsatisfactory work pending implementation of necessary corrective action to bring the unsatisfactory conditions into conformance.

3.4 The organizational structure and functional responsibility assignments are such that attainment of program objectives is accomplished by individuals or groups who inspect, examine, audit or otherwise verify conformance to established requirements, and who are independent of the individuals or groups who performed the original activity.

4.0 ORGANIZATION AND RESPONSIBILITIES

Attachment 1 depicts the Rancho Seco Organization Chart.

Specific duties and responsibilities of positions/groups that involve performance of quality functions are as follows:

4.1 ASSISTANT GENERAL MANAGER - NUCLEAR reports directly to the General Manager and is responsible for the safe and reliable operation of Rancho Seco. In fulfilling this responsibility, the AGM, Nuclear establishes the District Nuclear Policy through written directives, and has delegated authority and responsibility for development and execution of the Quality Program to the Manager, Nuclear Quality & Industrial Safety.

Positions or organizations reporting directly to the AGM, Nuclear include: Deputy AGM, Nuclear; Manager, Nuclear Quality & Industrial Safety; Manager, Nuclear Licensing; Manager, Plant Closure Tack Force.

The AGM, Nuclear has the responsibility and authority for development and execution of the Rancho Seco Quality Program and is committed to achieving the objectives to ensure optimum quality performance and safe, reliable operation. In fulfillment of this commitment, the AGM, Nuclear conducts a final review of Rancho Seco Quality Manual revisions, and provides signature approval upon concurrence.

The AGM, Nuclear is responsible for the administrative actions necessary to assure that the Rancho Seco Quality Program is implemented by the organizations under his direction. To this extent, the AGM, Nuclear maintains a continuing involvement in quality matters and assesses the scope, status, implementation and effectiveness of the Quality Program through Quality Status Reports, Trend Analyses, Root Cause Analyses, independent Quality Audits or Surveillance summary reports, and Management Safety Review Committee (MSRC) meeting minutes.

4.2 MANAGER, NUCLEAR QUALITY AND INDUSTRIAL SAFETY reports directly to the AGM, Nuclear. Ensures that an active quality program is implemented at SMUD in accordance with regulatory requirements.

The Manager, Nuclear Quality and Industrial Safety is independent of the pressures of production and has sufficient authority and organizational freedom to identify problems that affect quality, recommend solutions, and verify implementation of solutions. Commensurate with this responsibility is the authority to initiate action to stop unsatisfactory work and control further processing, delivery, installation, construction or modification of nonconforming items, or continuation of nonconforming services/operations, pending correction of the unsatisfactory condition.

The qualification requirements of the Manager, Quality and Industrial Safety are as follows:

a. Education: BS in Engineering or related science

b. Experience: Four years experience in the field of quality assurance, or equivalent number of years of nuclear plant experience in a supervisory position, preferably at an operating nuclear plant or a combination of the two. At least one year of this four years experience shall be nuclear power plant experience in the implementation of the quality assurance program.

The duties and responsibilities of the Manager, Nuclear Quality and Industrial Safety include:

a. Developing, maintaining, and ensuring the effective implementation of the Rancho Seco Quality Program.

b. Developing a vendor quality assurance evaluation program for maintenance of an Approved Suppliers List (ASL).

c. Monitoring the corrective action program.

d. Developing and monitoring the nonconformance control program.

e. Directing the activities of the Nuclear Quality & Industrial Safety Department.

f. Developing and implementing an audit and surveillance program to ensure conformance to the Quality Manual, Technical Specifications, Federal Regulations, applicable Regulatory Guides, Codes and Standards.

4.2 (Continued)

g. Providing qualified inspection personnel to perform inspection activities for plant operations, receiving, maintenance, modifications/construction, and source inspections.

h. Ensuring that a training program for the department personnel who perform audits, surveillance activities, inspections, documentation control or other quality related activities is maintained.

i. Providing for periodic review and trend analysis of deficiency documents to detect possible adverse quality trends.

j. Maintaining communications with regulatory agencies, suppliers, contractors and other Rancho Seco departments on Quality matters.

k. Participating in the disposition of nonconformances.

l. Participating as a member of the Management Safety Review Committee.

m. Reporting to the AGM, Nuclear on the status and adequacy of the Quality Program.

n. Notifying management of problems affecting quality and recommending corrective actions.

o. Establishing and verifying that appropriate quality requirements for procurement of safety related materials, components or services are specified in procurement documents.

p. Coordinating with the managers of other organizations to assure that their organizational procedures comply with applicable requirements of the overall Quality Program and regulatory documents.

q. Developing and monitoring Safety and Loss Prevention Programs.

4.3 MANAGER NUCLEAR LICENSING reports directly to the AGM, Nuclear. Provides regulatory guidance, compliance and licensing services to maintain the operating license at Rancho Seco.

The duties and responsibilities of the Manager, Nuclear Licensing include:

a. Managing licensing activities, including those related to maintaining the license, generic licensing issues, and the Updated Safety Analysis Report commitments.

b. Preparing all safety analyses as required per 10CFR50.59.

c. Providing guidance and counsel on current and future regulatory matters.

d. Maintaining the USAR and the Technical Specifications.

e. Analyzing and determining the root cause for selected events such as Licensee Event Reports.

f. Ensuring compliance with regulatory requirements and commitments.

g. Providing a centralized communication channel with all regulatory and insuring agencies including NRC, INPO, and ANI.

h. Administering the Commitment Control Program.

i. Reporting of occurrences or significant events.

4.4 MANAGER, PLANT CLOSURE TASK FORCE reports to the AGM, Nuclear. Responsible for overall management of nuclear plant closure and decommissioning action plan including project definition, implementation and accountability.

The duties and responsibilities of the Manager, Plant Closure Task Force include:

a. Ensuring Plant Closure Project Action Plans are developed and implemented.

b. Evaluating performance of project personnel and contractors.

c. Providing coordination and interface with the District corporate Rancho Seco Closure Task Force.

4.5 DEPUTY AGM, NUCLEAR reports directly to the AGM, Nuclear. Responsible for functioning as the AGM, Nuclear with fully delegated authority in the event the AGM, Nuclear is not onsite.

The duties and responsibilities of the Deputy AGM, Nuclear include:

a. Ensuring effective decisions on Nuclear Plant administrative and day-to-day operations issues.

b. Ensuring Nuclear Plant commitments are met as scheduled.

c. Maximizing acceptance of responses to Nuclear Plant audits and inquiries.

d. Representing the District in meetings and committees with federal, state and local agencies, insurers, industry groups and others.

e. Maximizing effectiveness of nuclear policies and procedures by investigating and preparing recommendations for the AGM, Nuclear.

4.6 MANAGER, NUCLEAR PLANT reports directly to the Deputy AGM, Nuclear. Responsible for operating Rancho Seco Nuclear Generating Station in a safe and efficient manner to protect the health and safety of the public.

The duties and responsibilities of the Manager, Nuclear Plant include:

a. Establishing policies and direction within the Nuclear Plant areas to support the goals and objectives established by the AGM, Nuclear and the District for Rancho Seco.

b. Providing a physically secure environment consistent with the operation of a nuclear plant and in conformance with regulatory requirements.

c. Providing a professional work environment for SMUD and contractor personnel.

d. Promoting the credibility of Rancho Seco and SMUD management with the District's customer/owners and with the nuclear industry and regulatory bodies.

e. Directing the conduct of operations of the physical plant in the areas of operations, radiological monitoring, chemistry and radiochemistry control.

f. Assuring Quality and Safety Programs are implemented within areas of responsibility.

4.6.1 NUCLEAR OPERATIONS MANAGER reports directly to the Manager, Nuclear Plant. Responsible for plant availability and for operating the plant in a safe, reliable, and legal manner.

The duties and responsibilities of the Nuclear Operations Manager include:

a. Ensuring compliance with internal and external control requirements by managing adherence to regulations, procedures, policies, standards and specifications.

b. Maintaining plant within technical specification limits during all operating and shutdown modes.

c. Ensuring plant safety during normal, abnormal, and accident modes by providing adequate qualified and trained personnel.

d. Establishing and adhering to procedural controls for operations activities.

5→ e. Establishment and maintenance of the Operations Technical
← Advisor (OTA) Program, as plant conditions dictate.

4.6.2 NUCLEAR CHEMISTRY MANAGER reports directly to the Manager, Nuclear Plant. Responsible for maintaining control of plant chemistry and meeting regulatory requirements.

The duties and responsibilities of the Nuclear Chemistry Manager include:

a. Ensuring control of plant chemistry, and supporting efficient operations by managing and advising management on chemistry issues.

b. Ensuring compliance with regulatory requirements for chemistry by managing requirements and programs, and ensuring adherence to procedures.

c. Ensuring that chemistry functions support plant operations and maintenance by planning, scheduling, and managing the department.

d. Maintaining the site monitoring program for airborne and liquid effluent.

4.6.3 NUCLEAR RADIATION PROTECTION MANAGER reports directly to the Manager, Nuclear Plant. Responsible for minimizing employee and public exposure to radioactivity, and meeting regulatory requirements. The duties and responsibilities of the Nuclear Radiation Protection Manager include:

a. Implementing program to minimize the radiation exposure to plant employees and contractors.

b. Ensuring proper controls over radioactive waste by managing radwaste processing and control.

c. Ensuring compliance with regulatory requirements for radiation protection and radwaste by managing requirements and programs, and ensuring adherence to procedures.

d. Ensuring that radiation protection functions support plant operations and maintenance by planning, scheduling, and managing the department.

e. Developing, maintaining and implementing the ALARA program.

4.7 NUCLEAR ENVIRONMENTAL MONITORING & EMERGENCY PREPAREDNESS MANAGER reports directly to the Deputy AGM, Nuclear. Ensures the health and safety of the public and plant personnel during normal operation, and in the event of an emergency at Rancho Seco.

The duties and responsibilities of the Nuclear Environmental Monitoring & Emergency Preparedness Manager include:

a. Developing, maintaining, and implementing an emergency plan in accordance with specified requirements.

b. Offsite sample collection and monitoring of routine/ accidental radiological releases into the general environment.

c. Conducting emergency drill and personnel training on the emergency plan.

d. Minimizing preventable contamination of plant personnel areas by supporting and auditing radiation protection.

4.8 MANAGER, NUCLEAR TECHNICAL SERVICES reports directly to the Deputy AGM, Nuclear. Responsible for plant design, design modifications to plant systems, design specification development, design change control, systems engineering, procurement engineering, performance monitoring, surveillance testing including in-service inspection and testing, reactor engineering and weld engineering.

The duties and responsibilities of the Manager, Nuclear Technical Services include:

a. Maintaining performance and safety of operating plant safety systems by effectively utilizing Systems Engineering concept for plant support.

b. Ensuring health and safety of staff by fostering adherence to radiation protection practices.

c. Providing design documents such as drawings, specifications, and other documents defining technical requirements of systems, structures, and components to yield a safe and reliable plant design.

d. Establishing and implementing a fire protection program in accordance with regulatory requirements.

e. Establishing and implementing an Inservice Inspection (ISI) and Inservice Testing (IST) Program.

f. Reviewing and approving post-maintenance testing.

g. Procuring, installing, testing, validating and maintaining all communication related hardware and software.

h. Maintaining the Master Equipment List (MEL) to provide a ready reference for design and procurement information for listed equipment.

i. Providing engineering input to the Maintenance Department to aid in the development of maintenance work plans.

j. Providing field engineering support during modification work activities to resolve in-process problems; verify performance to design requirements and assigned procedures.

4.9 MANAGER, NUCLEAR MAINTENANCE reports directly to the Deputy AGM, Nuclear. Maintains the physical condition of the plant in a reliable and safe condition.

The duties and responsibilities of the Manager, Nuclear Maintenance include:

a. Managing maintenance and modifications activities.

b. Ensure department compliance with internal and external requirements by managing adherence to applicable codes, regulations, procedures, policies, standards and specifications.

c. Establishing and maintaining planned preventive maintenance, standard work packages, and other tools and methodologies to achieve an effective maintenance program.

d. Coordinating with Technical Services to develop preventive maintenance tasks.

e. Assembling and implementing modification work packages upon issuance of design change documents.

5++ f. Managing the work of the Labor Contractor and other labor contractors assigned work activities.

4.10 MANAGER, NUCLEAR SUPPORT SERVICES reports directly to the Deputy AGM, Nuclear. Provides centralized administrative services in the form of Scheduling and Cost Control, Contracts, Document Control, Records Management, Information Services, Security, and Training.

4.10.1 MANAGER, NUCLEAR SECURITY reports to the Manager, Nuclear Support Services and is responsible for the security force at Rancho Seco. The Security Group is also responsible for maintaining the security plan and security plan implementing procedures in accordance with 10 CFR 73.55.

4.10.2 NUCLEAR TRAINING MANAGER reports directly to the Manager, Nuclear Support Services. Provides training support to Nuclear Organization Departments through a systems approach to training for the development of training programs, and other requested and approved training activities.

The duties and responsibilities of the Nuclear Training Manager include:

a. Overall management and direction of training programs.

b. Achieving and maintaining the prescribed training programs and activities to satisfy NRC regulatory and industry standards.

c. Developing and providing training for departments within and outside of the Organization in accordance with approved
5→← Training procedures including all formal classroom, laboratory and simulator training.

d. Reviewing training programs and materials for use within other departments.

e. Documenting training in accordance with NRC regulatory and industry standards and District requirements.

5→← 4.10.3 SUPERVISORS, NUCLEAR SCHEDULING AND COST CONTROL reports directly to the Manager, Nuclear Support Services. Supports the implementation of those activities that are required for plant operation, through schedule development and cost control.

The duties and responsibilities of the Supervisors, Nuclear Scheduling and Cost Control include:

a. Apprising management of progress impediments and obtain commitments for corrective action.

b. Improving safety system availability by monitoring status of corrective maintenance work requests, assigning priorities, and scheduling work.

c. Assisting management in budget preparation and cost control.

5++ 4.10.4 SUPERVISORS, NUCLEAR DOCUMENT CONTROL and RECORDS MANAGEMENT report directly to the Manager, Nuclear Support Services.

The duties and responsibilities of the Supervisors, Nuclear Document Control and Records Management include:

a. Ensuring effective document control for Nuclear Organization Departments.

b. Ensuring records are stored and maintained consistent with regulatory requirements.

5+ 4.11 AGM, CORPORATE AND CUSTOMER SERVICES reports directly to the General Manager. Responsible for providing materials management and contracting support for Rancho Seco through the Manager, General Services.

4.12 MANAGER, GENERAL SERVICES reports to the AGM, Corporate and Customer Services. The duties and responsibilities of the Manager, General Services include:

a. Providing purchasing services for safety related materials and services.

b. Providing contracting services for safety related materials and services.

c. Interfacing with Technical Services and Quality for incorporation of technical and quality requirements in purchasing and contract documents, as applicable.

d. Providing warehousing services including receipt, inventory control, material storage and material issue, in accordance with approved procedures. +

4.13 PLANT REVIEW COMMITTEE (PRC) The Committee composition responsibility and authority, subjects to be reviewed and reporting requirements are addressed in Section 6 of the Rancho Seco Technical Specifications and the PRC Procedure. The PRC functions to advise the AGM, Nuclear on all matters related to nuclear safety.

4.14 MANAGEMENT SAFETY REVIEW COMMITTEE (MSRC) The Committee composition, responsibility and authority, subjects to be reviewed, administrative controls, and reporting requirements are addressed in Section 6 of the Rancho Seco Technical Specifications and the MSRC Procedure.

The MSRC also functions to provide for an independent review and audit of designated activities in areas of:

a. Nuclear power plant operations
b. Chemistry and radiochemistry
c. Radiological safety
d. Records/documentation
e. Modifications/maintenance
f. EQ Program
g. Fire protection
h. Refueling
i. Emergency planning
j. Quality Assurance practices
k. Training

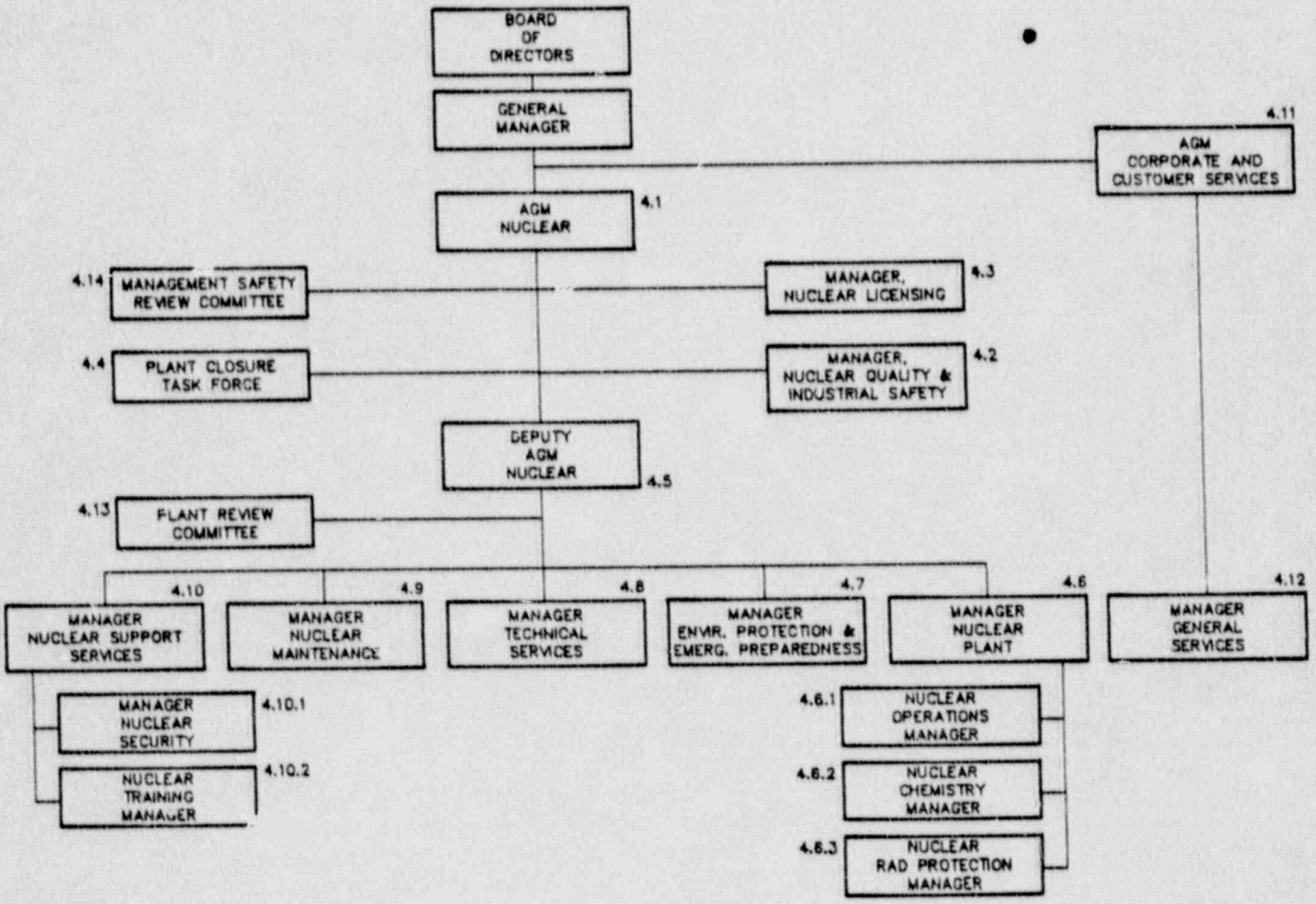
5.0 GENERAL RESPONSIBILITIES

Each department or organization involved in the design, modification, maintenance and operation of Rancho Seco is responsible for documenting and maintaining its internal organization charts, supported by written job descriptions or other narrative material in sufficient detail that the duties and authority of each individual whose work affects quality is clearly defined.

Each manager has the responsibility to ensure that department programs implement the quality program requirements. Specific duties and responsibilities are outlined in Sections II through XVIII of this manual.

ATTACHMENT 1

RANCHO SECO ORGANIZATION



II. QUALITY ASSURANCE PROGRAM

1.0 PURPOSE

The purpose of this section is to describe the Quality Program which shall be implemented at Rancho Seco Nuclear Generating Station.

2.0 REFERENCES

2.1 10CFR50, Appendix B, Criterion II, Quality Assurance Program

2.2 ANSI N45.2-1971, Section 3, Quality Assurance Program

2.3 Safety Guide 33/ANSI N18.7, Administrative Controls for Nuclear Power Plants.

2.4 10CFR71, Subpart H, Quality Assurance Requirements for Packaging and Transportation of Radioactive Material.

3.0 POLICY

The Quality Program described herein is designed to assure compliance with the requirements of 10CFR50, Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants", including the requirements of applicable NRC Regulatory Guides, and ANSI Standards.

4.0 GENERAL REQUIREMENTS

4.1 This Quality Manual is organized to present the Rancho Seco Quality Program in the order of the 18 criteria of 10CFR50 Appendix B. The manual states the Rancho Seco policy for each of the criteria and describes how the controls pertinent to each are to be carried out. Any changes made to this manual that do not reduce the commitments previously accepted by the Nuclear Regulatory Commission (NRC) shall be submitted to the NRC at least annually. Any changes made to this manual that reduce the commitments previously accepted by the NRC will be submitted to the NRC and shall receive NRC approval prior to implementation. The submittal of the changes described above will be made in accordance with the requirements of 10CFR50.54(a).

4.2 The Rancho Seco Quality Program is implemented by organizations responsible for achieving quality and by organizations responsible for verifying quality.

4→ The Manager, Nuclear Technical Services is responsible to develop a Master Equipment List (MEL). The MEL is a list of equipment that have been assigned an equipment ID. The MEL provides a ready reference for design and procurement information for each listed equipment. Q-List is a subset of the MEL, that includes all equipment that have been assigned QA Class 1 or identified as requiring Environmental Qualification. The MEL is revised as a ← result of design changes.

4.3 The Operations Phase Quality Assurance Program applies to activities affecting the operation and the quality of safety related structures, systems, components, and services during plant operation, maintenance, testing and modifications.

Appropriate elements of this manual apply to emergency plans, radiation protection procedures, radioactive waste shipment 4→ programs, fire protection, effluent control and environmental ← monitoring.

4.4 The programmatic Regulatory Guides and ANSI Standards, and the applicable revisions, to which SMUD commits with regard to quality assurance matters and an appropriate explanation of interpretations and exceptions are tabulated in Attachment 2.1 and 2.2 of this section.

4.5 The extent to which the Quality Program and its controls are applied are established as follows:

a. SMUD uses the criteria specified in Engineering Procedures for identifying structures, systems and components to which the Quality Program applies;

b. This identification process results in a MEL which identifies safety-related items. The MEL is a controlled document. Safety-related items are determined by engineering analysis of the function(s) of plant structures, systems and components in relation to safe operation and shutdown;

c. The controls specified in the Quality Assurance Program described in this manual are applied to safety-related items.

4.6 Safety-related activities are accomplished under controlled conditions. Preparations for such activities include confirmation that prerequisites have been met.

4.7 Development, control, and use of computer programs affecting nuclear power plant safety-related design and operation are subject to appropriate controls.

4.8 Training and indoctrination programs shall be established to assure that personnel responsible for performing and verifying activities that affect quality have the required proficiency and qualifications to perform the assigned tasks.

4.9 Quality Program: Policy/Procedures/Instructions

a. The Quality Program is documented by written Rancho Seco policies, procedures, and instructions. The overall policies and general requirements are outlined in the Rancho Seco Quality Manual. Specific details related to implementation of the established quality policies are contained in the Rancho Seco Procedures. Additional implementing procedures shall be prepared as required by the organizations responsible for performing the function. The Quality organization reviews such procedures to assure that quality-related functions are accomplished in a controlled manner, with specified equipment, under suitable environmental conditions, and that prerequisites have been satisfied prior to inspection or testing.

b. The Manager, Nuclear Quality & Industrial Safety is responsible for the preparation, issuance, and control of the Rancho Seco Quality Manual.

c. Proposed changes to the Quality Manual shall be reviewed and approved by the Manager, Nuclear Quality & Industrial Safety and the AGM, Nuclear. Requests to revise any portion of this manual shall be submitted in writing to the Manager, Nuclear Quality & Industrial Safety.

d. The Rancho Seco Quality Manual, including any changes, supplements, or attachments, is issued and maintained as a controlled document.

e. Rancho Seco Quality Manuals are assigned by the Manager, Nuclear Quality & Industrial Safety to managers of departments. All changes will be distributed to the assignees and they will be responsible for inserting the revisions in their manuals.

4.10 Resolution of Differences

The provisions delineated in the Rancho Seco Quality Manual shall take precedence over differing Quality requirements specified in other departmental procedures until the Manager, Nuclear Quality & Industrial Safety has evaluated the issue and determined which requirement(s) are to be modified.

Questions on disputes involving interpretation of the requirements or implementation of this manual must be referred to the Manager, Nuclear Quality & Industrial Safety for resolution and/or initiating changes to commitments or procedures as necessary to resolve the differences.

4.11 Packaging and Transportation of Radioactive Material

This Quality Program shall be applied to packaging and transportation of radioactive material as specified in Ref. 2.4.

5.0 RESPONSIBILITIES

General organizational responsibilities are described in Section I, ORGANIZATION.

ATTACHMENT 2.1

REGULATORY COMMITMENTS

SMUD commits to the requirements of the regulations and industry standards listed below with any exceptions identified in Attachment 2.2.

DOCUMENT	REVISION/DATE	TITLE
1. Reg. Guide 1.8	*	Personnel Selection and Training *As referenced in the Tech. Spec.
2. Safety Guide 28 ANSI N45.2	6/7/72 71	Quality Assurance Requirements for Nuclear Power Plants
3. Reg. Guide 1.28 ANSI/ASME NQA-1 Supplement 17S-1	8/85 83	Supplementary Requirements for Quality Assurance Records (See exception No. 1 in Attachment 2.2)
4. Safety Guide 30 ANSI N45.2.4	8/11/72 72	Quality Assurance Requirements for the Installation, Inspection, and Testing of Instrumentation and Electrical Equipment (See exception No. 2 in Attachment 2.2)
5. Safety Guide 33	*	Administrative Controls for Nuclear Power Plants *As referenced in the Tech. Spec.
6. Reg. Guide 1.37 ANSI N45.2.1	3/16/73 73	Quality Assurance Requirements for Cleaning Fluid Systems and Associated Components of Water-Cooled Nuclear Power Plants (See exception No. 3 in Attachment 2.2)
7. Reg. Guide 1.38 ANSI N45.2.2	3/16/73 72	Quality Assurance Requirements for Packaging, Shipping, Receiving, Storage and Handling of Items for Water-Cooled Nuclear Power Plants (See exception No. 8 in Attachment 2.2)
8. Reg. Guide 1.39 ANSI N45.2.3	3/16/73 73	Housekeeping Requirements for Water-Cooled Nuclear Power Plants (See exception No. 4 in Attachment 2.2)

ATTACHMENT 2.1 (Continued)

REGULATORY COMMITMENTS

DOCUMENT	REVISION/DATE	TITLE
9. Reg. Guide 1.54 ANSI N101.4	6/73 72	Quality Assurance Requirements for Protective Coatings Applied to Nuclear Facilities
10. Reg. Guide 1.58 ANSI N45.2.6	9/80 78	Qualification of Nuclear Power Plant Inspection, Examination, and Testing Personnel (See exception No. 5 in Attachment 2.2)
11. Reg. Guide 1.64 ANSI N45.2.11	10/73 74	Quality Assurance Requirements for the Design of Nuclear Power Plants (See exception No. 6 in Attachment 2.2)
12. Reg. Guide 1.74 ANSI N45.2.10	2/74 73	Quality Assurance Terms and Definitions (See exception No. 7 in Attachment 2.2)
13. Reg. Guide 1.94 ANSI N45.2.5	2 78	Quality Assurance Requirements for Installation, Inspection, and Testing of Structural Concrete and Structural Steel During the Construction Phase of Nuclear Power Plants
14. Reg. Guide 1.116 ANSI N45.2.8	6/76 75	Quality Assurance Requirements for Installation, Inspection, and Testing of Mechanical Equipment and Systems
15. Ref. Guide 1.120	11/77	Fire Protection Guidelines for Nuclear Power Plants
16. Reg. Guide 1.123 ANSI N45.2.13	7/77 76	Quality Assurance Requirements for Control of Procurement Items and Services for Nuclear Power Plants
17. Reg. Guide 1.144 ANSI N45.2.12	1/79 77	Auditing of Quality Assurance Programs for Nuclear Power Plants
18. Reg. Guide 1.146 ANSI N45.2.23	8/80 78	Qualification of Quality Assurance Program Audit Personnel for Nuclear Power Plants
19. Reg. Guide 4.15	2/79	Quality Assurance for Radiological Monitoring Programs

ATTACHMENT 2.2

EXCEPTIONS

EXCEPTION NO. 1: Reg. Guide 1.28/NQA-1, Supplement 17S-1

SMUD complies with the recommendations of this regulatory guide with the following clarifications:

With regard to Section 2.4 of Supplement 17S-1 titled Index: The phrase "an index" is clarified to mean a collection of documents or indices which, when taken together, supply the information attributed to "an index" in the standard.

The specific location of a record "within a storage area" may not be delineated (e.g. The specific location within a computer record file may not be constant. Further, SMUD may utilize a computer assisted random access filing system where such location could not be readily "documented," or would such a location be "relevant.") The storage location will be delineated, but where file locations change with time, the specific location of a record within that file may not always be documented.

With regard to Section 4.3, Supplement 17S-1 titled Safekeeping: Routine general office and nuclear site security systems and access controls are provided: No special security systems are required to be established for record storage areas.

With regard to Section 4.4, Supplement 17S-1, titled Facility: This Section provides no distinction between temporary and permanent facilities. To cover temporary storage, the following clarification is added: "Active records (those completed but not yet duplicated or placed on microfilm) may be temporarily stored in one-hour fire rated file cabinets. In general, records shall not be maintained in such temporary storage for more than four months after completion without being duplicated (for dual storage) or being placed on microfilm. Open-ended documents revised or updated on a more-or-less continuing basis over an extended period of time (e.g. personnel qualification and training documents, equipment history cards) which are cumulative in nature (e.g. nonconforming item logs and control room log books) shall become QA records when they are issued as a specific revision (e.g. the master audit schedule); when they are filled-up or discontinued (e.g log books or equipment history cards); on a predefined periodic basis when the completed portion of the on-going document shall be transferred to document control as a "record" (e.g. training and qualification records).

ATTACHMENT 2.2 (Continued)

EXCEPTION NO. 2: RG 1.30/ANSI N45.2.4-72

Specific clarifications for ANSI N45.2.4 - 1972 are indicated below by sections.

Section 1.4 Definitions in this standard which are not included in ANSI N45.2.10 shall be used; all definitions which are included in ANSI N45.2.10 shall be used as clarified in SMUD commitment to Regulatory Guide 1.74.

Section 2.1 Planning requirements, as determined by engineering, shall be incorporated into modification procedures.

Section 2.3 Procedures and Instructions shall be implemented as set forth in Sections II, III, V, X and XI of this program and by compliance with the Rancho Seco Plant Technical Specifications and Regulatory Guide 1.33 (ANSI N18.7).

Section 2.4 Results will be implemented as set forth in Sections X, XI, and XVII of this program and by compliance with ANSI N18.7 in lieu of the requirements set forth here. 4++

Section 2.5.2 Calibration and Control covers three classes of instrumentation used by SMUD: (1) M&TE (portable measuring instruments, test equipment, tools, gages, and non-destructive test equipment used in measuring and inspecting safety-related structures, systems, and components); (2) reference standards (primary, secondary, transfer, and working), and (3) permanently installed process instrumentation (PI).

With respect to the first sentence, M&TE and reference standards shall be included in calibration program and shall either be calibrated at prescribed intervals or shall be calibrated prior to use. With respect to the last sentence, personnel shall be trained and procedures shall require that the calibration sticker shall be reviewed to determine calibration status prior to use: This label shall be considered to clearly identify equipment which is out of calibration. Lack of a sticker shall require record review and affixing a new sticker based on calibration data. M&TE and reference standards shall comply with sentences 2, 3 and 4.

ATTACHMENT 2.2 (Continued)

EXCEPTION NO. 2: RG 1.30/ANSI N45.2.4-73 (Continued)

With respect to the third sentence, SMUD uniquely identifies each safety-related component of permanently installed process instrumentation. This identification provides traceability to calibration data. These actions are SMUD's alternative to the tagging or labeling of items to indicate the calibration date and the identity of the person who performed the calibration. Permanently installed process instrumentation shall comply with sentences 1, 2, and 5.

Section 3 — Preconstruction Verification will be implemented as follows: (1) is required only for modifications, (2) no special checks are required to be made by the person withdrawing a replacement part from the warehouse - equivalent controls are assured by compliance with Regulatory Guide 1.38 (ANSI N45.2.2) as set forth in this table, and, (3) shall be complied with as determined by engineering, by individual technicians as part of the modification process.

Section 5.1 — Inspections, including subsections 5.1.1, 5.1.2, and 5.1.3, will be implemented as set forth in Section X of this program. The inspection program will incorporate, as determined by engineering and Quality those items listed in these subsections.

Section 5.2 — Tests, including subsections 5.2.1 through 5.2.3, will be implemented as set forth in Sections III and XI of this program. In some cases Surveillance testing may be used to meet the appropriate requirements of this section.

Section 6 — Post-Construction Verification is not generally considered applicable at operating facilities because of the scope of the work and the relatively short interval between installation and operation. Where considered necessary by engineering and Quality, the elements described in this Section will be used in the development and implementation of inspection and testing programs as describe in Sections III, X, and XI of this program.

Section 7 — Data Analysis and Evaluation will be implemented as stated herein after adding the clarifying phrase "Where used" at the beginning of that paragraph.

ATTACHMENT 2.2 (Continued)

EXCEPTION NO. 3: RG 1.37/ANSI N45.2.1-73

Specific clarifications for this Regulatory Guide and ANSI N45.2.1 - 1973 are indicated below:

With regard to Paragraph C.3 of Regulatory Guide 1.37: The water quality for final flushing of fluid systems and associated components shall be at least equivalent to the quality of the operating system water, except for the oxygen and nitrogen content; but this does not infer that chromates or other additives, normally in the system water, will be added to the flush water.

With regard to Paragraph C.4 of Regulatory Guide 1.37: Expendable materials, such as inks and related products; temperature indicating sticks; tapes; gummed labels; wrapping materials (other than polyethylene); water soluble dam materials; lubricants; NDT penetrant materials and couplants, desiccants, which contact stainless steel or nickel alloy surfaces shall not contain lead, zinc, copper, mercury, cadmium and other low melting points metals, their alloys or compounds as basic and essential chemical constituents. no more than 0.1 percent (1,000 ppm) halogens will be allowed where such elements are leachable or where they could be released by breakdown of the compounds under expected environmental conditions.

With regard to Section 5 of ANSI N45.2.1 - 1973 titled Installation Cleaning: The recommendation that local rusting on corrosion resistant alloys be removed by mechanical methods is interpreted to mean that local rusting may be removed mechanically, but the use of other removal means is not precluded, as determined by engineering or Chemistry.

EXCEPTION NO. 4: RG 1.39/ANSI N45.2.3-73

Specific classifications for ANSI N45.2.3 - 73 are indicated for specific sections below:

Section 1.4 Definitions: Definitions in this Standard which are not included in Regulatory Guide 1.74 (ANSI N45.2.10) will be used: all definitions which are included in ANSI N45.2.10 will be used as clarified in SMUD's commitment to Regulatory Guide 1.74.

ATTACHMENT 2.2 (Continued)

EXCEPTION NO. 4: RG 1.39/ANSI N45.2.3-73 (Continued)

Section 2.1 Planning: SMUD may choose not to utilize the five-level zone designation system, but will utilize standard janitorial and work practices to maintain a level of cleanliness commensurate with program requirements in the areas of housekeeping, plant and personnel safety, and fire protection.

Cleanliness will be maintained, consistent with the work being performed, so as to prevent the entry of foreign material into safety-related systems. This will include, as a minimum, documented cleanliness inspections which will be performed prior to system closure. As necessary, (e.g. the opening is larger than the tools being used) control of personnel, tools, equipment, and supplies will be established when the reactor system is opened for inspection, maintenance, modification or repair.

Additional housekeeping requirements will be implemented as required for control of radioactive contamination.

Section 2.2 Procedures and Instructions: Appropriate procedures will be written and implemented.

Section 3.2 Control of Facilities: SMUD may choose not to utilize the five-level zone designation system, but will utilize standard janitorial and work practices to maintain a level of cleanliness commensurate with program requirements in the areas of housekeeping, plant and personnel safety, and fire protection.

Cleanliness will be maintained, consistent with the work being performed, so as to prevent the entry of foreign material into safety-related systems. This will include, as a minimum, documented cleanliness inspections which will be performed prior to system closure. As necessary, (e.g. the opening is larger than the tools being used) control of personnel, tools, equipment, and supplies will be established when the reactor system is opened for inspection, maintenance, modification or repair.

Additional housekeeping requirements will be implemented as required for control of radioactive contamination.

ATTACHMENT 2.2 (Continued)

EXCEPTION NO. 5: Reg. Guide 1.58/ANSI N45.2.6

SMUD complies with the recommendation of the regulatory guide with the following clarification.

With regard to Paragraph C.5: The Level III function of inspection planning, reviewing and concurring with inspection, examination and testing procedures is performed by designated individuals from the Quality & Industrial Safety Department.

EXCEPTION NO. 6: Reg. Guide 1.64/ANSI N45.2.11

SMUD complies with the recommendation of the regulatory guide with the following clarification:

With regard to Paragraph C.2: In exceptional circumstances, the designer's immediate supervisor can perform design verification, provided:

1. The supervisor is the only technically qualified individual available.

2. The need is individually documented and approved in advance by the supervisor's management.

3. QA audits cover frequency and effectiveness of use of supervisors as design verifiers to guard against abuse.

EXCEPTION NO. 7: RG 1.74/ANSI N45.2.10-73

SMUD complies with the recommendations of this regulatory guide with the following clarifications.

SMUD reserves the right to define additional words or phrases which are not included in this Standard. Such additional definitions will be documented in appropriate procedures.

In addition to the Standard's definition of "Inspection," SMUD will use the following: "Inspection (when used to refer to activities that are NOT performed by QC personnel) - Examining, viewing closely, scrutinizing, looking over or otherwise checking activities. Personnel performing these functions are not necessarily certified to Regulatory Guide 1.58 (ANSI N45.2.6)."

ATTACHMENT 2.2 (Continued)

EXCEPTION NO. 7 (Continued)

When SMUD intends for Inspection to be performed in accordance with the QA Program by personnel certified as required by that program and for activities defined by "inspection" in ANSI N45.2 10, appropriate references to the plant QC organization or the procedures to be used for performing the activity will be made. If such references are NOT made, inspections are to be considered under the additional definition given above.

"Independent Verification": - Verification by an individual other than the person who performed the operation or activity being verified that required actions have been completed. Such verification may not necessarily require confirmation of the action at the physical location if adequate remote indication of completion of action is available. In determining the acceptability of remote verification, the consequences of the action not being 100% completed and the validity of the remote indication for confirming the completion of the desired action will be considered. Examples include, but are not limited to: Verification of a breaker opening by observed remote breaker indication lights; verification of a set point (made with a voltmeter or ammeter for example) by observing the actuation of status or indicating lights at the required panel-meter indicated value; verification that a valve has been positioned by observing the starting or stopping of flow on meter indications or by remote valve positions indicating lights.

"Will" - (Not defined in any ANSI Standard) - Means the same as "shall" except when used to denote simple futurity. When used to denote futurity, "will" is normally followed by "be".

EXCEPTION NO. 8: RG 1.38/ANSI N45.2.2

Section 2.7 Classification of Items - SMUD may choose not to utilize the four level classification of items, but will address packaging and storage requirements for items based on the needs of individual items and manufacturers recommendation.

III. DESIGN CONTROL

1.0 PURPOSE

This section describes the Quality Program measures established for control of design activities affecting safety-related structures, systems and components at the Rancho Seco Nuclear Generating Station.

In addition, this section also defines the requirements for the development and implementation of control measures to assure that design functions affecting performance of operational, construction and modification activities are carried out in a planned, controlled, and orderly manner and are in compliance with applicable regulatory commitments

2.0 REFERENCES

2.1 10CFR50, Appendix B, Section III, "Design Control"

2.2 10CFR50.49, "Environmental Qualification of Electrical Equipment"

2.3 10CFR50.59, "Changes, Tests and Experiments"

2.4 Reg Guide 1.64/ANSI N45.2.11, 1974, "Quality Assurance Requirements for the Design of Nuclear Power Plants", with exceptions noted in Section II of this manual.

2.5 ANSI N45.2, Section 4, "Design Control"

3.0 POLICY

The requirements specified in this section apply to all organizations performing design functions for modifications, changes, replacement or addition of safety-related structures, systems or components at Rancho Seco.

4.0 GENERAL REQUIREMENTS

Procedures shall be established and executed to control design activities. Procedures covering design control activities shall include the following requirements:

4.1 Applicable design inputs such as design bases, regulatory requirements, codes and standards, methodology and all assumptions with appropriate justifications are identified, documented and correctly translated into design output documents such as specifications, drawings, procedures or instructions.

4.2 Exceptions, waivers to or deviations from engineering requirements are documented and controlled.

4.3 Methods are specified for the selection and classification of suitable materials, parts, equipment, and processes used in meeting applicable safety-related requirements for structures, systems and components.

Materials, parts, components and equipment which are standard, commercial (off-the-shelf) or which require environmental qualification, or which have been previously approved for other similar applications are reviewed for suitability and appropriately classified.

4.4 Systematic methods are established for communicating and controlling the flow of related design information across the external and internal design interfaces, including any changes to the design information as the work progresses.

4.5 Interfaces between the Nuclear Technical Services Department and other participating design organizations (either internal or external to SMUD) are identified and documented. This identification includes those organizations providing design inputs, design analyses, design specifications, and design verification for operational, construction and modification design activities.

4.6 Participating design organizations establish and describe the controlled methods for preparation, review, approval, release, distribution, and revision of documents (such as design analyses, specifications, drawings, reports) involving design interfaces.

4.7 Verifying or checking the adequacy of design for modifications or changes performed. Acceptable verification methods include, but are not limited to design reviews, alternate calculations or qualification testing. If a test program is used to verify the adequacy of a design, it must include qualification testing of a prototype unit under the most adverse design conditions.

4.8 Computer program codes used for design calculations are certified for use and their use is specified.

4.9 Design verification is performed by competent individuals or groups other than those who performed the original design but who may be from the same organization. This verification may be performed by the originator's supervisor provided the supervisor is the only technically qualified individual available and meets the appropriate clarification provisions of Ref. 2.4. The results of the design verification efforts must be documented with the identification of the verifier clearly provided.

4.10 Provisions are specified for the control of design analyses such as reactor physics, stress, thermal, hydraulic, and accident; compatability of materials; accessibility for inservice inspection, maintenance, and repair; and delineation of acceptance criteria for inspections and tests.

4.11 Design problems which are identified during field installation or testing activities shall be documented and forwarded to the Nuclear Technical Services Department for evaluation and resolution.

4.12 Design and specification changes, including field changes, receive the same degree of control and approval as the original design unless another qualified, responsible organization is specifically designated.

4.13 Errors and deficiencies in the design process, including computer programs, that could adversely affect safety-related structures, systems or components are documented and corrective action is taken to preclude repetition.

4.14 Proposed modifications or design changes which involve an unreviewed safety question or a change to the Rancho Seco Technical Specifications are handled in accordance with the requirements of 10CFR50.59.

4.15 Modifications are reviewed by plant personnel for effect on plant operation prior to making the modification operational.

4.16 Design documents are reviewed for accessibility of equipment and components for inservice inspection, tests, maintenance or modifications.

4.17 Design and/or test documentation must be obtained from all suppliers on procurements of safety-related ASME code components used for replacement or modification to Rancho Seco.

5.0 **RESPONSIBILITIES**

General organizational responsibilities are described in Section I, ORGANIZATION.

5.1 Manager, Nuclear Technical Services is responsible for implementing a design control process per this section and to:

a. Provide and control design change packages.

b. Optimize nuclear fuel value and reactor safety by managing fuels management and core analysis.

c. Ensure integrity and regulatory conformance of configuration control.

d. Provide plant configuration control including establishing and maintaining baseline documents.

e. Provide computer engineering support for plant computers, IDADs, training simulator, etc.

f. Perform probabilistic analysis in support of plant design.

g. Provide engineering support to Nuclear Power Production.

h. Provide and maintain engineering procedures, standards and specifications and drawings.

i. Provide technical support to maintain the training simulator operable and within plant configuration.

4→+ j. Prepare and maintain the Master Equipment List described in Section II.

5.2 The Manager, Nuclear Quality & Industrial Safety is responsible for:

a. Review and concurrence of design control procedures.

b. Monitoring implementation of the Design Control Program.

c. Auditing the Design Control Program per Section XVIII of this manual.

IV. PROCUREMENT DOCUMENT CONTROL

1.0 PURPOSE

This section describes the Quality Program measures established to control procurement documents for safety-related material, equipment and services at the Rancho Seco Nuclear Generating Station.

2.0 REFERENCE DOCUMENTS

2.1 10CFR50, Appendix B, Criterion IV, Procurement Document Control

2.2 ANSI N45.2-1971, Section 5, Procurement Document Control

2.3 Reg Guide 1.123/ANSI N45.2.13-1976, Quality Assurance Requirements for Control of Procurement of Items and Services for Nuclear Power Plants

3.0 POLICY

Procurement documents for Rancho Seco safety-related materials, equipment, components/spares or services shall include applicable technical requirements, quality requirements, regulatory requirements and other provisions necessary to assure that purchased items and services are adequately described to the supplier.

4.0 GENERAL REQUIREMENTS

4.1 Procedures shall be established and implemented to control the preparation, review, approval and issuance of procurement documents.

4.2 Procurement documents shall include provisions for the following, as applicable:

a. Description of item or service.

b. Identification of design specifications and technical requirements by reference to specific drawings, codes, regulations, industry standards or other documentation, including the applicable revision thereto, that describe the items or services to be furnished.

c. Identification of test, inspection and acceptance requirements, and any special instructions and requirements 4++ for activities such as design, fabrication, identification, cleaning, erecting, packaging, handling, shipping and extended storage.

d. Identification of applicable QA Program criteria.

e. Applicability of 10CFR21.

f. Identification of the documentation, such as drawings, 4++ specifications, procedures, fabrication and inspection plans, inspection and test records, personnel and procedure qualifications, and chemical and physical test reports to be prepared and maintained by the supplier or contractor, and requirements for submittal to SMUD for review and approval.

g. Identification of those records to be retained, controlled and maintained by the supplier or contractor and those to be delivered to SMUD at the time of shipment of the procured item.

h. SMUD's right of access to the supplier's facilities and records for inspection and audits.

i. Extension of applicable requirements to lower tier subcontractors and suppliers, including SMUD's right of access to facilities and records.

j. Supplier submittal of nonconforming items and SMUD approval for "Accept-as-is" or "Repair" dispositions of nonconformances.

k. SMUD's right to hold shipment if procurement document requirements, including those for documentation, have not been fulfilled.

4.3 Technical and quality review by qualified personnel and approval by designated individuals shall be performed prior to issuance of the procurement document. The review and approval shall be documented and available for verification.

4.4 Review and concurrence by Quality shall be performed to assure adequacy of quality requirements and to verify that the requirements are correctly stated, inspectable and controllable; that there are adequate acceptance and rejection criteria; that the procurement documents have been prepared, reviewed and approved in accordance with the requirements of the established procedures.

4→← 4.5 Materials Group shall verify that the supplier is on the Approved Suppliers List (ASL).

4.6 Revisions to procurement documents shall receive an equivalent review and approval as the original documents. Exceptions to this include changes in quantity, estimated price, cost codes, taxes, format or editorial changes that do not affect the quality of the item or service.

4.7 Procurement documents for spare or replacement parts for safety-related structures or systems shall specify procurement controls at least equivalent to those required for purchase of the original equipment.

4.8 Methods shall be established to assure that the items received are traceable to procurement documents.

5.0 RESPONSIBILITIES

General organizational responsibilities are described in Section I, ORGANIZATION.

4→← 5.1 Manager, General Services is responsible to:

a. Purchase items in conformance to procurement documents.

b. Purchase safety-related items from approved suppliers.

c. Arrange for suppliers to be placed on the Approved Suppliers List.

d. Arrange for source inspection when specified on the procurement documents.

4→ 5.2 The Manager, Technical Services is responsible for:

a. Maintaining a staff of qualified Procurement Engineers.

b. Providing technical and quality requirements for purchasing documents for safety-related items.

→ 5.3 The Manager, Nuclear Quality & Industrial Safety is responsible for:

a. Review and concurrence of material management procedures.

b. Review and concurrence of procurement documents for safety-related items.

c. Auditing the procurement program per Section XVIII of this manual.

d. Developing and maintaining an Approved Suppliers List.

1

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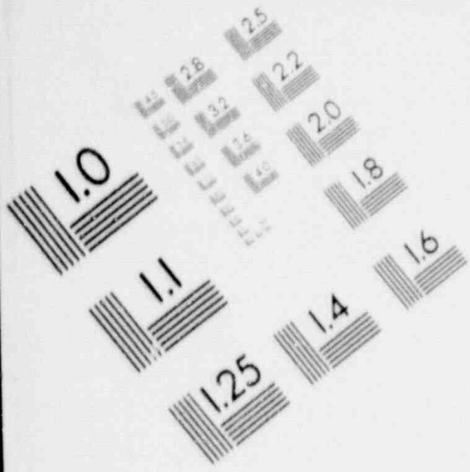

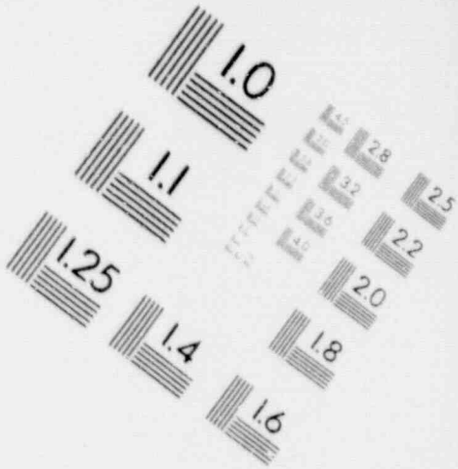

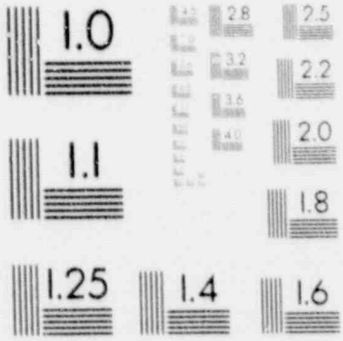

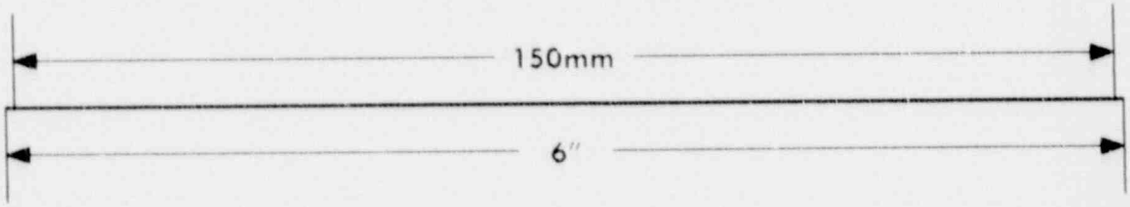

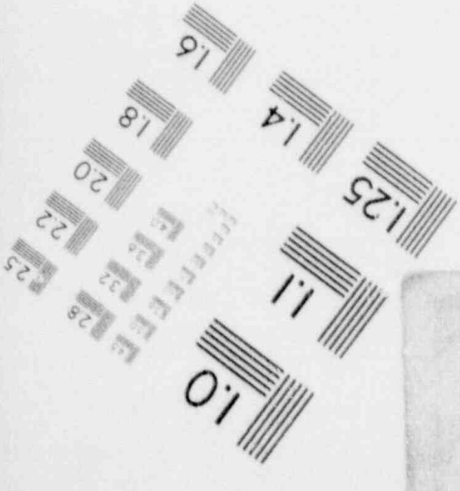

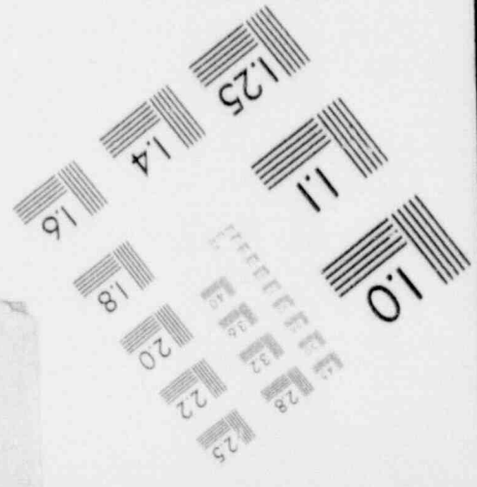

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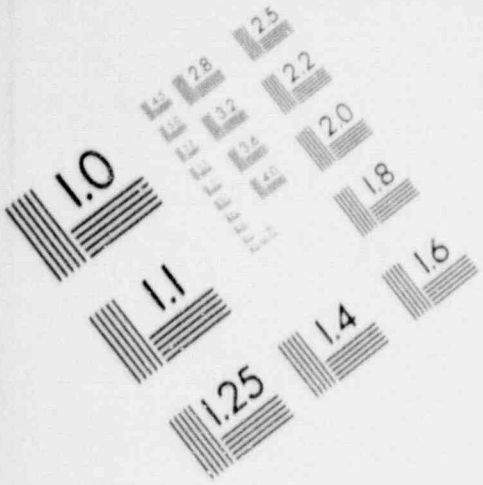

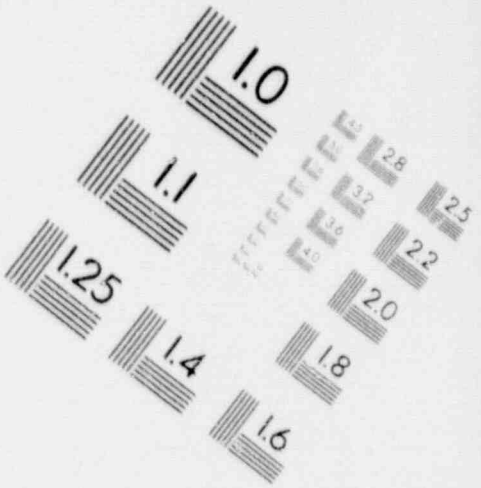

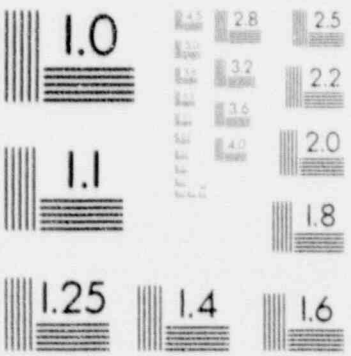

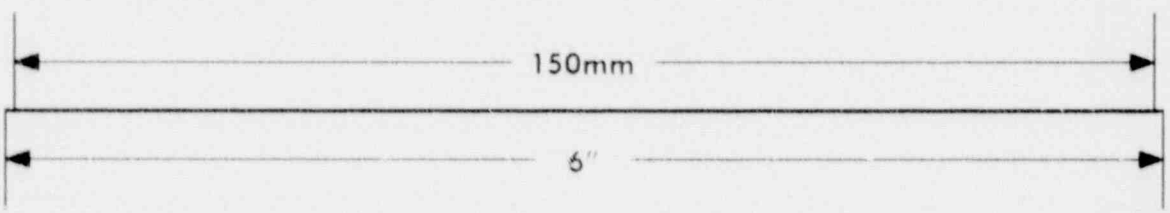

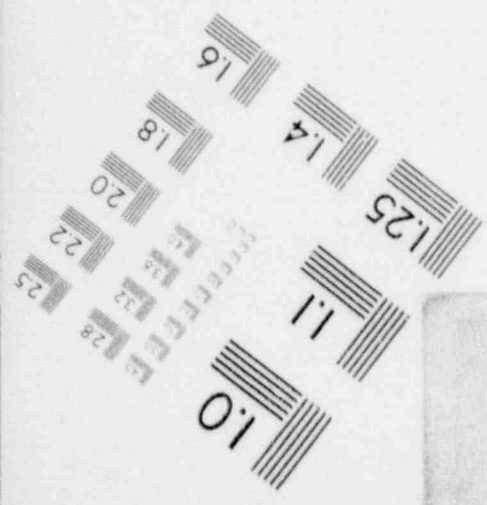

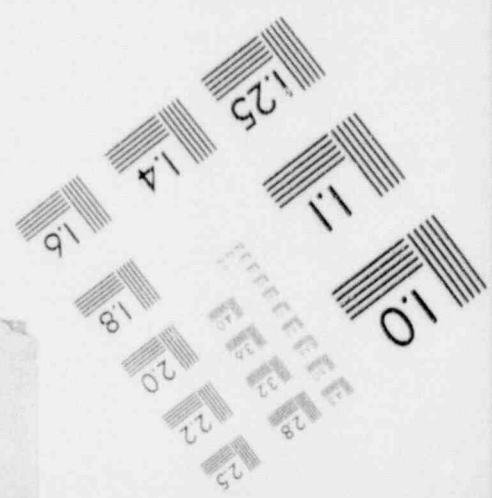

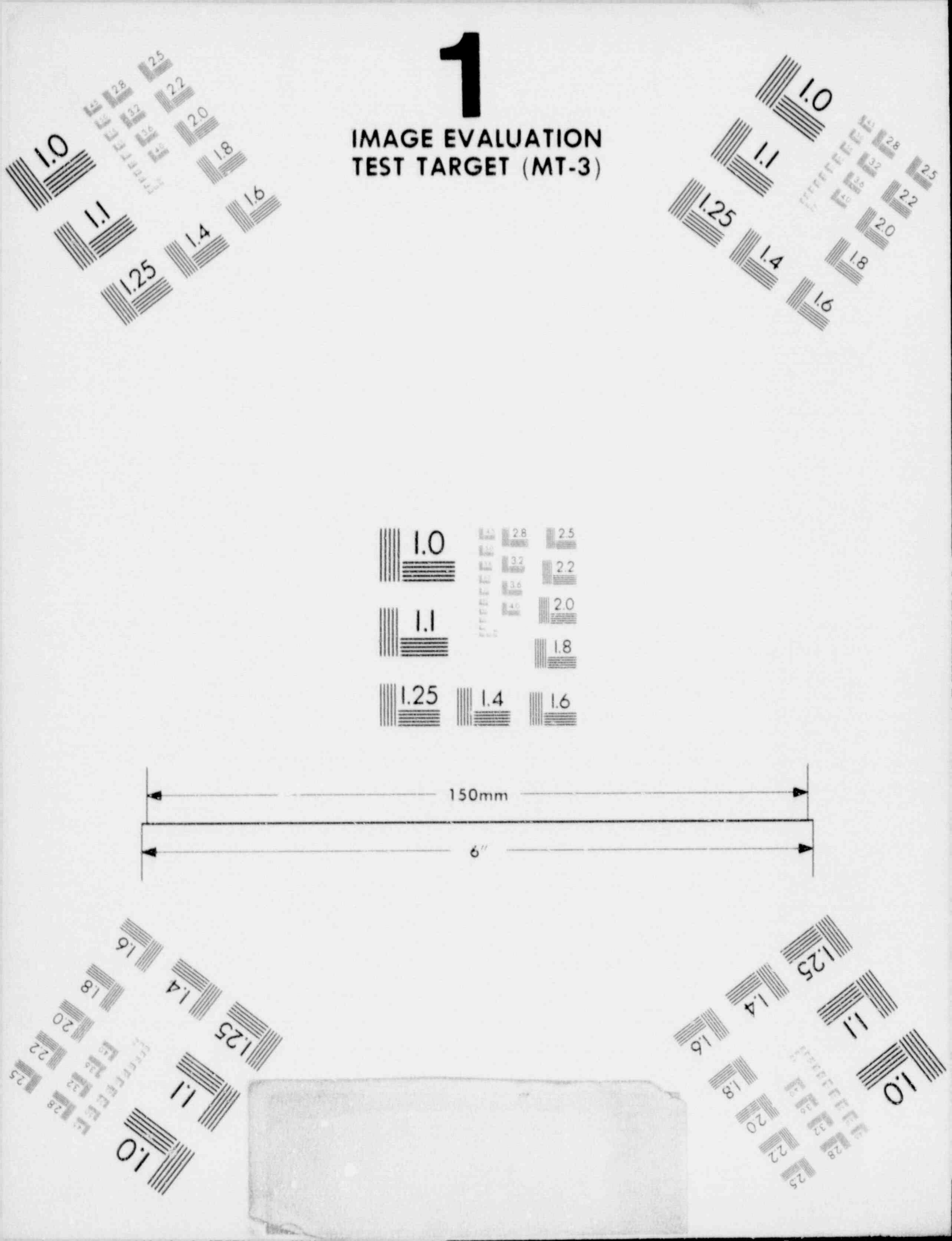
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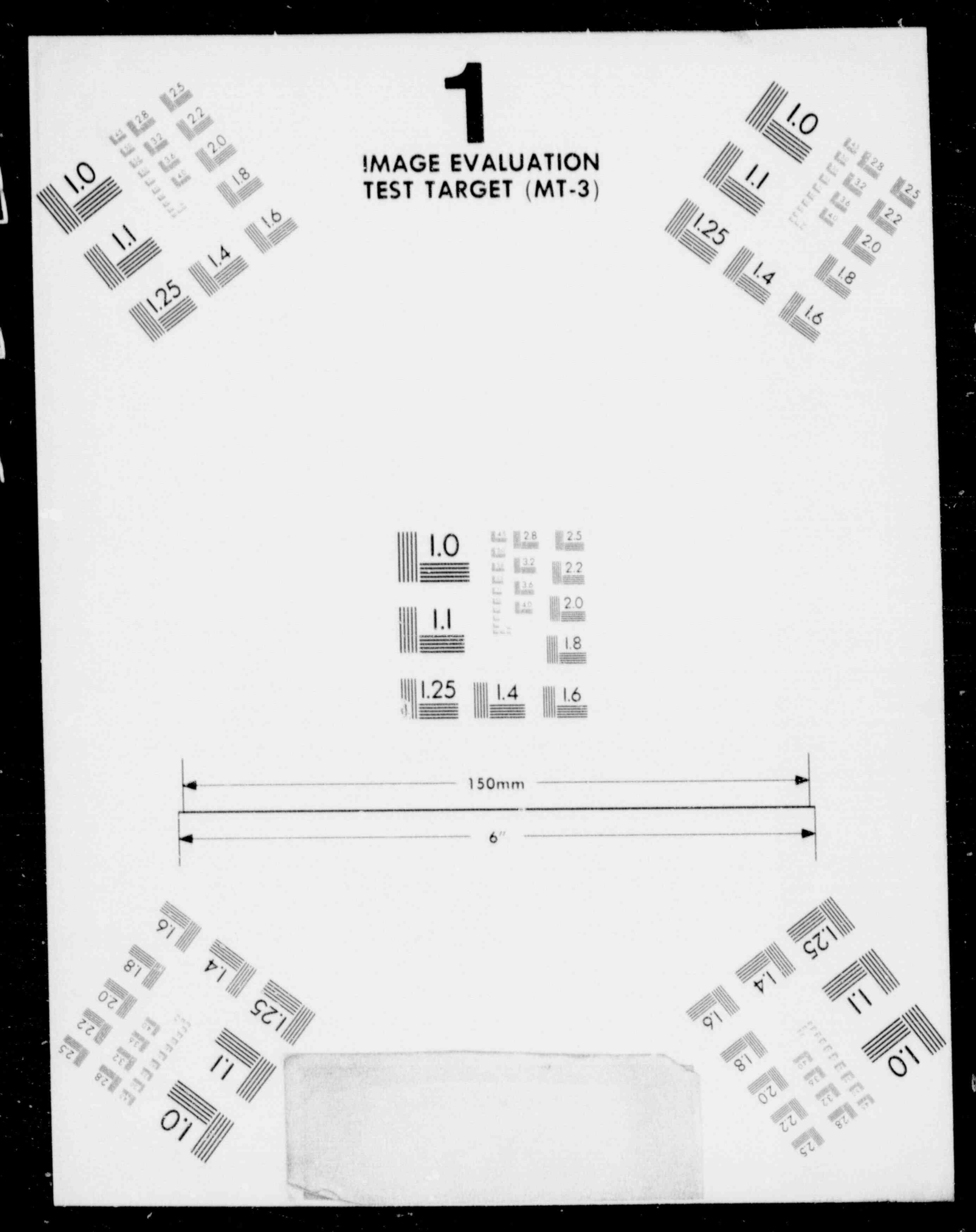
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V. INSTRUCTIONS, PROCEDURES AND DRAWINGS

1.0 PURPOSE

This section describes the Quality Program measures established to assure that all the activities affecting the quality or safety of the Rancho Seco Nuclear Generating Station are described and accomplished in accordance with documented instructions, procedures, drawings or other documents appropriate to the circumstances.

2.0 REFERENCE DOCUMENTS

2.1 10CFR50, Appendix B, Criterion V, Instructions, Procedures and Drawings

2.2 ANSI N45.2-1971, Section 6, Instructions, Procedures and Drawings

2.3 Safety Guide 33/ANSI N18.7, Administrative Controls for Nuclear Power Plants.

3.0 POLICY

Activities affecting the operational safety or quality performance at Rancho Seco shall be described by and implemented in accordance with documented instructions, procedures, and drawings.

4.0 GENERAL REQUIREMENTS

4.1 Written instructions, procedures, drawings, or other documents appropriate to the circumstances shall be prepared to provide measures for complying with the provisions of the Rancho Seco Quality Program.

4.2 Instructions, procedures, or drawings shall include applicable quantitative and/or qualitative acceptance criteria for verifying that the activities have been satisfactorily accomplished.

4.3 The responsible organizations shall establish procedures which define responsibilities and delineate the sequence of actions to be accomplished in the preparation, review, approval and control of instructions, procedures, or drawings, and changes thereto.

4.4 Activities affecting quality shall be accomplished in accordance with approved instructions, procedures, and drawings.

5.0 **RESPONSIBILITIES**

General organizational responsibilities are described in Section I, ORGANIZATION.

5.1 The managers of each department are responsible to assure that activities affecting quality performed by their departments are described in instructions, procedures and drawings.

5.2 The Manager, Nuclear Quality & Industrial Safety is responsible to perform audits to verify that any activities affecting quality are described in instructions, procedures and drawings. Audits shall be conducted in accordance with Section XVIII of this manual.

VI. DOCUMENT CONTROL

1.0 PURPOSE

This section describes the Quality Program measures established for the issuance and control of documents that control activities affecting quality at the Rancho Seco Nuclear Generating Station.

2.0 REFERENCE DOCUMENTS

2.1 10CFR50, Appendix B, Criterion VI, Document Control

2.2 ANSI N45.2-1971, Section 7, Document Control

3.0 POLICY

Applicable documents, including changes thereto, that prescribe activities affecting the quality operation at Rancho Seco shall be issued and controlled in a manner that precludes the use of inappropriate or outdated documents.

4.0 GENERAL REQUIREMENTS

4.1 Procedures shall be established for review, approval, issue, change and use of documents in the following categories:

a. Design documents (e.g., calculations, drawings, specifications, analyses) including documents related to computer codes;

b. As-built drawings, procedures and related documents;

c. Procurement documents;

d. Instructions and procedures for activities such as: fabrication, construction, modification, installation, inspection, test and station maintenance and operation;

e. Procedures that implement the quality assurance program;

4.1 (Continued)

f. Final Safety Analysis Report;

g. Updated Safety Analysis Report;

h. Reports of nonconformances;

i. Technical Specifications;

j. Master Equipment List

4.2 Procedures which establish the review, approval, issue, change and use of documents shall include as appropriate:

a. Criteria to ensure that adequate technical and quality requirements are incorporated prior to implementation;

b. Organizations responsible for review, approval, issue and revision;

c. Provisions for a review for concurrence with quality assurance-related aspects by the Nuclear Quality and Industrial Safety Department;

d. Review of changes to documents by the same organizations that performed the initial review and approval or by the organizations designated in accordance with the applicable procedures.

4.3 Controlled documents, including changes, are issued and distributed to the organizations identified on the applicable distribution list so that:

a. The documents are available as required at the work location prior to commencing work; and

b. Obsolete or superseded documents are removed from work areas and replaced by applicable revisions in a timely manner.

4.4 Master lists or equivalent means are used to identify the current revision of controlled document. When master lists are used, they are updated and distributed to designated personnel who are responsible for maintaining current copies of the lists.

5.0 **RESPONSIBILITIES**

General organizational responsibilities are described in Section I, ORGANIZATION.

5.1 The Supervisor, Document Control is responsible to develop and implement a document control program in accordance with this section.

5.2 The Manager, Nuclear Quality & Industrial Safety is responsible for:

a. Review and concurrence of document control procedures.

b. Review and concur with procedures, instructions or documents that implement the Quality Program to assure compliance with the applicable provisions of this manual.

c. Auditing the document control program per Section XVIII of this manual.

VII. CONTROL OF PURCHASED MATERIAL, EQUIPMENT AND SERVICES

1.0 PURPOSE

This section describes the Quality Program measures established to assure that safety-related material, equipment and services purchased for the Rancho Seco Nuclear Generating Station conforms to the procurement documents.

2.0 REFERENCE DOCUMENTS

2.1 10CFR50, Appendix B, Criterion VII, Control of Purchased Material, Equipment, and Services

2.2 ANSI N45.2-1971, Section 8, Control of Purchased Material, Equipment, and Services

2.3 Reg. Guide 1.123/ANSI N45.2.13-76, Quality Assurance Requirements for Control of Procurement of Items and Services for Nuclear Power Plants

3.0 POLICY

Measures shall be established to assure that safety-related material, equipment and services conform to the specified requirements of the related procurement documents.

4.0 GENERAL REQUIREMENTS

4.1 Control of purchased material, equipment and services shall include the following, as appropriate:

a. Source evaluation and selection of suppliers.

b. Objective evidence of quality furnished by the supplier.

c. Source inspection, audit, and/or surveillance activities.

d. Examination of items or services upon delivery or completion.

4.2 Source evaluation and selection of suppliers shall be based on one or more of the following criteria:

a. An evaluation of the Supplier's QA Program/Manual/Procedures.

b. Review and evaluation of historical quality performance data.

c. Supplier audits by SMUD or by utility groups to which SMUD belongs.

4→← d. Utilities holding Nuclear Plant Operating Licenses

e. ASME Manufacturer/Material Supplier Certificate of Authorization.

Results of source evaluation shall be documented and retained on file. Acceptable suppliers shall be listed on SMUD's Approved Supplier List which is controlled by the Nuclear Quality and Industrial Safety Department.

4.3 Procedures for control of materials, equipment and services shall address the following:

a. Responsibilities of departments performing supplier technical and quality evaluations, and the method of evaluation.

b. Inspection activities that specify the characteristics or processes to be witnessed, inspected or verified; the method of verification and the extent of documentation required; and the organization responsible for implementing the inspection.

c. Auditing to verify conformance and implementation to requirements of this policy. Source inspection and audits may not be necessary when conformance of an item to procurement requirements can be verified by receipt inspection, review of test reports, certified reports or other means specified by the Manager, Nuclear Quality and Industrial Safety.

d. Receipt inspection of supplier furnished items to assure: (1) the proper identification of items on the receiving documentation, (2) that the items are inspected and judged acceptable in accordance with predetermined instructions prior to installation or use, (3) that inspection records or certificates of conformance are available at the plant site prior to installation or use of the items, and (4) that items accepted and released are identified as to their inspection status prior to storage or use.

4.3 (Continued)

e. Review, acceptance, and maintenance of records to assure adequacy of documentation that identifies the purchased item, and that specific procurement requirements (e.g., codes, standards, specifications) have been met or satisfied.

f. Review and approval of documentation required to be submitted by the procurement documents (CMTR's, C of C, Procedures, Specifications, etc.).

g. Procurement control of spare or replacement parts for safety-related systems to assure compliance with requirements that are equivalent to the original item, or those specified by a properly reviewed and approved revision to the original requirements.

5.0 **RESPONSIBILITIES**

General organizational responsibilities are described in Section I, ORGANIZATION.

5.1 Manager, Nuclear Technical Services is responsible to:

a. Ensure quality and qualifications of parts and materials by managing definition of quality specifications, and storage in accordance with regulatory requirements, in close cooperation with maintenance and operations.

b. Ensure regulatory compliance of materials and parts by managing documentation, and review (and implementation as appropriate) of NRC and related parts/materials bulletins.

4→ c. Examination of items or services upon delivery or completion, as deemed necessary to supplement or replace ← formal inspection activities.

5.2 The Manager, Nuclear Quality & Industrial Safety is responsible for:

a. Developing and maintaining an Approved Suppliers List.

b. Performance of required inspections, evaluations, and audits.

c. Review and concurrence with material management procedures.

d. Auditing the Materials Management Program in accordance with Section XVIII of this manual.

VIII. IDENTIFICATION AND CONTROL OF MATERIALS, PARTS & COMPONENTS

1.0 PURPOSE

This section describes the Quality Program measures established to provide for the identification and control of safety-related material, parts and components for the Rancho Seco Nuclear Generating Station.

2.0 REFERENCE DOCUMENTS

2.1 10CFR50, Appendix B, Criterion VIII, Identification and Control of Materials, Parts and Components

2.2 ANSI N45.2-1971, Section 9, Identification and Control of Materials, Parts and Components

3.0 POLICY

Procedures shall be established and implemented to assure that materials, parts or components are properly identified and controlled to preclude the use of incorrect or nonconforming items.

4.0 GENERAL REQUIREMENTS

4.1 Safety-related materials, parts or components, including partially fabricated subassemblies and consumables, shall be identified such that they can be related to their applicable drawing, specification, purchase document and inspection records at any stage from initial receipt through fabrication/ construction, installation, repair, modification or use.

4.2 Identification, controls, implementation procedures and documentation shall be used to ensure that only correct and accepted items are used during all stages of construction, installation and operation.

4.3 Unique identification of items is required, e.g., by part number, serial number, heat number, drawing identification number or other traceable coding methods.

4.4 Identification is required to be maintained either on the item or on records traceable to the item. Physical identification, such as by marking or tagging, shall be used to the maximum extent practical.

4.5 When specified by codes, standards, procurement documents, or other requirements, identification is required such that items are traceable to appropriate documentation (e.g., specifications, drawings, purchase orders, manufacturing and inspection documents, nonconformance reports, physical or chemical mill test reports).

4.6 Where identification marking is employed, the marking is required to be clear, unambiguous and indelible, and shall be applied such as not to affect the fit, function or quality of the item.

4.7 Markings shall be transferred to each part of an item, if subdivided. The markings shall not be obliterated or hidden by surface treatment or coatings unless other means of identification are substituted.

4.8 Procedures are required to provide for the verification and documentation of correct identification of items prior to release for use. Items may be conditionally released under adequate procedural controls.

4.9 Bulk consumables (such as weld rod, chemicals, reagents, gases, resins, lubricating oil and grease, fuel oil, cleaning solvents, etc.) are required to be identified and controlled in accordance with approved procedures that specify the applicable requirements for identification and use of the consumables.

4.10 In the event the identification or traceability of an item is lost, it shall be handled in accordance with Section XV of this manual.

5.0 **RESPONSIBILITIES**

General organizational responsibilities are described in Section I, ORGANIZATION.

4→ 5.1 Manager, General Services is responsible for identification and control of items from procurement through withdrawal from the warehouse.

5.2 The Manager, Nuclear Maintenance is responsible for maintaining identification and control of items from withdrawal from the warehouse through installation.

← 5.3 The Manager, Nuclear Quality & Industrial Safety is responsible for:

a. Review and concurrence of procedures for controlling material, parts and components from procurement through storage, issuance and installation.

b. Auditing the process for identification and control of materials, parts and components in accordance with Section XVIII of this manual.

IX. CONTROL OF SPECIAL PROCESSES

1.0 PURPOSE

This section describes the Quality Program measures established to govern special processes used at the Rancho Seco Nuclear Generating Station.

2.0 REFERENCE DOCUMENTS

2.1 10CFR50, Appendix B, Criterion IX, Control of Special Processes

2.2 ANSI N45.2-1977, Section 10, Control of Special Processes

2.3 ASME Section V and IX

3.0 POLICY

Procedures shall be established and implemented to assure that special processes, and equipment are controlled and that the activities are accomplished by qualified personnel and procedures.

4.0 GENERAL REQUIREMENTS

4.1 Procedures shall be prepared to provide for proper control of special processes, which include welding, heat treating, chemical cleaning, application of protective coatings and nondestructive examination (NDE).

4.2 Controls shall be established to assure that only approved materials and equipment are used to perform special processes.

5→ 4.3 Personnel who perform special processes shall be qualified in accordance with industry standards.

4.4 Special process requirements shall be prescribed in the controlling specifications, drawings, procurement documents or procedures.

5.0 RESPONSIBILITIES

General organizational responsibilities are described in Section I, ORGANIZATION.

5→ 5.1 Manager, Nuclear Technical Services is responsible for:

← a. Specifying the special processes on design documents governing maintenance/modifications activities.

b. Developing, qualifying, and maintaining special process procedures identified in Para 4.1 of this section.

c. Qualifying personnel to perform special processes identified in Para 4.1 of this section.

5→← d. Performing NDE other than those listed in 5.2.b.

5.2 The Manager, Nuclear Quality & Industrial Safety is responsible for:

a. Review and concurrence of special process procedures.

b. Performing NDE on Maintenance/Modification Activity.

c. Auditing the special process program in accordance with Section XVIII of this manual.

X. INSPECTION

1.0 PURPOSE

This section describes the Quality Program measures established to provide for the inspection of safety-related material, parts and components for the Rancho Seco Nuclear Generating Station.

2.0 REFERENCE DOCUMENTS

2.1 10CFR50, Appendix B, Criterion X, Inspection

2.2 ANSI N45.2-1971, Section 11, Inspection

2.3 Reg Guide 1.58/ANSI N45.2.6-78, Qualification of Nuclear Power Plant Inspection, Examination and Testing Personnel with exceptions noted in Section II of this manual.

2.4 Safety Guide 33/ANSI N18.7, Administrative Controls for Nuclear Power Plants

2.5 ASME Code, Section XI

3.0 POLICY

Procedures shall be established and implemented to assure that inspections are performed to verify compliance with specified requirements at Rancho Seco.

4.0 GENERAL REQUIREMENTS

4.1 Inspections shall be applied to receiving, maintenance, and modifications to verify that items and activities conform to specified requirements. In addition, a program for required inservice inspection of completed systems, structure and components shall be established and implemented.

4.2 Inspection planning documents shall be prepared or reviewed by the Nuclear Quality and Industrial Safety Department in accordance with established procedures. Inspection planning documents shall identify the following as applicable:

a. Characteristics and activities to be inspected;

b. Inspection organization;

c. Accept/reject criteria;

d. Hold points and/or witness points;

e. Inspection Methods;

f. Provisions for recording objective evidence of inspection results;

g. Measuring and test equipment of the necessary accuracy for performing inspection.

4.3 Process monitoring may be used where direct inspection alone is impractical or inadequate. Both inspection and process monitoring are performed when control is inadequate without both.

4.4 Training and qualification of personnel who perform inspections, including NDE, shall be performed in accordance with approved procedures.

4.5 Hold points are designated as mandatory inspection points when confirmation is needed that the work at the point is acceptable before additional work can proceed. Hold point inspections are performed, and work is released for further processing or use, by authorized personnel.

4.6 Inspections are performed and documented in accordance with written procedures. The results are documented and evaluated by qualified personnel in order to verify the acceptability of the item or work.

4.7 Inservice inspection and testing is performed and documented in accordance with a program of examinations, tests, and inspections of plant components and systems. Services of An Authorized Inspection Agency is retained to verify that the program is conducted in accordance with ASME code requirements.

4.8 Inspections of Maintenance and Modification activity are performed by Nuclear Quality and Industrial Safety Department personnel.

4.9 Inspection records shall contain the following where applicable:

a. Item inspected;

b. The date of the inspection;

c. Inspector or data recorder identification;

d. Identification of M&TE used to perform inspections;

e. Type of observation;

f. Results or acceptability;

g. Reference to information on action taken on nonconformances to resolve any discrepancies noted.

5.0 **RESPONSIBILITIES**

General organizational responsibilities are described in Section I, ORGANIZATION.

5.1 The Manager, Nuclear Quality & Industrial Safety is responsible for:

a. Qualifying Quality Control Inspectors.

b. Developing inspection planning for modification/maintenance activities.

c. Performing inspections per inspection plans.

5.2 The Manager, Nuclear Maintenance Department is responsible for assuring:

a. Inspections are performed as required by inspection planning.

b. Work does not proceed beyond inspector signoffs for hold points.

5.3 The managers of each department are responsible for:

a. Supporting inspection activities.

b. Providing prompt corrective action to any deficiencies found during the inspection.

XI. TEST CONTROL

1.0 PURPOSE

This section describes the Quality Program measures established to provide for acceptance and surveillance testing at the Rancho Seco Nuclear Generating Station.

2.0 REFERENCE DOCUMENTS

2.1 10CFR50, Appendix B, Criterion XI, Test Control

2.2 ANSI N45.2-1971, Section 12, Test Control

2.3 Safety Guide 33/ANSI N18.7, Administrative Controls for Nuclear Power Plants

3.0 POLICY

Procedures shall be established and implemented to assure that required testing to demonstrate that structures, systems and components will perform satisfactorily in service is identified, performed and documented.

4.0 GENERAL REQUIREMENTS

4.1 Tests shall be performed in accordance with procedures and criteria that designate when tests are required and how they are to be performed. Such testing includes the following:

a. Qualification tests, as applicable, to verify design adequacy.

b. Tests of equipment and components to assure their proper operation prior to delivery or pre-operational tests;

c. Pre-operational tests to assure proper and safe operation of systems and equipment prior to start-up tests or operations;

4.1 (Continued)

d. Start-up tests, including precritical, criticality, low-power and power ascension tests performed after fuel loading to assure proper and safe operation of systems and equipment.

e. Surveillance tests to assure continuing proper and safe operation of systems and equipment.

f. Maintenance tests after preventive or corrective maintenance.

4.2 Test procedures and instructions shall include provisions for the following, as applicable:

a. The requirements and acceptance limits contained in the applicable design and procurement documents;

b. Test prerequisites such as calibrated instrumentation, required test equipment, degree of completeness of the item to be tested, suitable and controlled environmental conditions and provisions for data collection and storage;

c. Verifying that test prerequisites have been met;

d. Instructions for performing the test;

e. Any inspection points;

f. Acceptance criteria;

g. Documenting or recording test data and results; and

h. Verification of completion.

4.3 Test procedures and instructions shall be reviewed by the applicable organizations for technical content.

4.4 Test results shall be documented and evaluated by responsible authorities to assure that test requirements have been satisfied.

4.5 Test records shall contain the following information where applicable:

a. Item tested and type of observation;

b. The date and results of the test;

c. Information related to deviations or nonconformances;

d. Identification of person recording the data;

e. Evidence as to the acceptability of the results; and

f. Action taken to resolve any deviations and nonconformances noted.

5.0 RESPONSIBILITIES

General organizational responsibilities are described in Section I, ORGANIZATION.

5.1 The Manager, Nuclear Quality & Industrial Safety is responsible for:

a. Performance of audits to assure conformance to testing requirements applicable to safety-related items per Section XVIII of this manual.

5.2 The Manager, Nuclear Technical Services is responsible for:

a. Establishing the procedure for acceptance and surveillance testing.

b. Providing personnel to perform the testing and acceptance evaluations.

XII. CONTROL OF MEASURING AND TEST EQUIPMENT

1.0 PURPOSE

This section describes the Quality Program measures established to provide for the control of measuring and test equipment at the Rancho Seco Nuclear Generating Station.

2.0 REFERENCE DOCUMENTS

2.1 10 CFR 50, Appendix B, Criterion XII, Control of Measuring and Test Equipment

2.2 ANSI N45.2-1971, Section 13, Control of Measuring and Test Equipment

2.3 Safety Guide 33/ANSI N18.7, Administrative Controls for Nuclear Power Plants.

2.4 Reg. Guide 1.30/ANSI N45.2.4-72, Quality Assurance Requirements for the installation, inspection and Testing of Instrumentation and Electric Equipment with exception noted in Section II of this manual.

3.0 POLICY

Procedures shall be established and implemented to assure that measuring and testing devices used in final acceptance of activities affecting quality are properly controlled, calibrated and adjusted at specified intervals to maintain the desired accuracy.

4.0 GENERAL REQUIREMENTS

4.1 Procedures shall be established for calibration, maintenance and control of measuring and test equipment utilized in the operation, measurement, inspection or monitoring of items.

4.2 Measuring and test equipment shall be uniquely identified and shall be traceable to its calibration test data.

4.3 Labels shall be attached to measuring and test equipment to display the next calibration due date. Where labels cannot be attached, a control system shall be used that identifies to potential users any equipment which may be beyond the calibration due date.

4.4 Measuring and test equipment shall be calibrated at specified intervals. These intervals are based on the amount of use, stability, characteristics and other conditions that could adversely affect the required measurement accuracy. Reference and secondary calibration standards shall be traceable to nationally recognized standards where they exist. Where national standards do not exist, provisions shall be established to document the basis for calibration.

4.5 M&TE shall be calibrated from reference standards with an accuracy ratio of at least four-to-one (reference standard to M&TE). Calibration accuracy ratios of less than four but equal to or better than one (Reference standard to M&TE) shall be acceptable when equipment required to meet specified requirements is not commercially available. The basis of acceptance in these cases shall be documented

4.6 M&TE used for calibrating plant process instrumentation (PI) shall have calibration ranges, precisions, and accuracies such that the PI can be calibrated from M&TE with an accuracy ratio of at least two-to-one (M&TE to PI). Calibration accuracy ratios of less than two but equal to or better than one shall be acceptable when equipment to meet specified requirements is not commercially available. The basis of acceptance in these cases shall be documented.

4.7 When measuring and testing equipment used for final inspection and test is found to be out of calibration, evaluations shall be conducted to determine the validity of the results obtained since the most recent calibration. The results of evaluations shall be documented. Retests or reinspections shall be performed on suspect items as necessary.

4.8 Identification of measuring and test equipment used shall be documented and traceable to work performed to allow for corrective measures to be taken when a device is found to be out of calibration.

5.0 **RESPONSIBILITIES**

General organizational responsibilities are described in Section I, ORGANIZATION.

5.1 The Manager, Nuclear Maintenance is responsible for:

a. Establishing methods for control of measuring and test equipment.

b. Determining the need for calibrated instruments and measuring devices in Rancho Seco activities.

c. Providing administrative procedures that address the requirements for calibration.

d. Control of measurement devices to ensure their use and accuracy.

5.2 The Manager, Nuclear Quality & Industrial Safety is responsible for:

a. Performing audits in accordance with Section XVIII of this manual to assure conformance to the program for control of measuring and test equipment.

XIII. HANDLING, STORAGE AND SHIPPING

1.0 PURPOSE

This section describes the Quality Program measures established to provide for the handling, storage, cleaning and preservation of material and equipment at the Rancho Seco Nuclear Generating Station.

2.0 REFERENCE DOCUMENTS

2.1 10CFR50, Appendix B, Criterion XIII, Handling, Storage and Shipping

2.2 ANSI N45.2-1971, Section 14, Handling, Storage and Shipping

2.3 Reg Guide 1.38/ANSI N45.2.2-1972, Packaging, Shipping, Receiving, Storage and Handling of Items for Nuclear Power Plants with exceptions noted in Section II of this manual.

3.0 POLICY

Procedures shall be established and implemented to assure that materials and equipment are properly handled, stored, shipped, cleaned and preserved to prevent damage or deterioration.

4.0 GENERAL REQUIREMENTS

4.1 Procedures shall be established for assuring that proper handling, storage, shipping and preservation instructions are included in applicable drawings and/or specifications. 4→←

4.2 When required for specific items, special protective environments, such as inert gas atmosphere, specific moisture content levels, and temperature levels, shall be specified.

4.3 A shelf-life program shall be in effect and monitored to prevent usage after the expiration date without recertification for extension of shelf-life.

4.4 Special material handling and preservation instructions shall be developed when required by applicable drawings and/or specifications.

4→ 4.6 Materials for packaging, shipment, and storage with the potential for causing contamination or radiation exposure require marking and labeling to indicate the need for special radiological ← controls.

5.0 **RESPONSIBILITIES**

General organizational responsibilities are described in Section I, ORGANIZATION.

5.1 The Manager, Nuclear Technical Services is responsible for:

4→ a. Establishing methods and procedures to ensure that ← applicable drawings and/or specifications include handling, storage, shipping, and preservation requirements.

5.2 The Manager, Nuclear Maintenance is responsible for:

a. Establishing methods for special handling, storage, and preservation during maintenance activities.

b. Providing administrative procedures which specify the required controls.

5.3 The Manager, Nuclear Quality & Industrial Safety is responsible for:

a. Performing audits in accordance with Section XVIII of this manual to assure conformance to the program for handling, storage, and shipping.

4→ 5.4 The Manager, General Services is responsible for:

a. Maintaining material control/warehousing control of items ← and equipment which require special handling and storage.

XIV. INSPECTION, TEST AND OPERATING STATUS

1.0 PURPOSE

This section describes the Quality Program measures established to provide for a system to identify the inspection, test and operating status of individual items at the Rancho Seco Nuclear Generating Station.

2.0 REFERENCE DOCUMENTS

2.1 10CFR50, Appendix B, Criterion XIV, Inspection, Test and Operating Status

2.2 ANSI N45.2-1971, Section 15, Inspection, Test and Operating Status

3.0 POLICY

Procedures shall be established and implemented to assure that measures are provided to indicate the status of inspections, tests and operations.

4.0 GENERAL REQUIREMENTS

4.1 Procedures shall be written to control nonconforming material, parts and components to prevent their inadvertent use in plant operations. 4↔

4.2 Procedures shall specify the degree of control required for the indication of inspection and test status of items required for modification activities.

4.3 The sequence of inspections, tests, and other operations, and changes thereto shall be controlled by procedures.

4.4 Procedures shall provide methods for identifying the nonconforming items, inoperable systems and components by tags, markings, labels, etc. to prevent inadvertent use.

5.0 **RESPONSIBILITIES**

General organizational responsibilities are described in Section I, ORGANIZATION.

5.1 The Nuclear Operations Manager is responsible for:

4→ a. Clearance procedures to ensure safety of personnel and equipment during maintenance and testing activities.

← b. Installation and removal of test and operating status indicators.

5.2 The Manager, Nuclear Quality & Industrial Safety is responsible for:

a. Identifying the quality status of material, parts, and components.

XV. NONCONFORMING MATERIALS, PARTS OR COMPONENTS

1.0 PURPOSE

This section describes the Quality Program measures established for controlling material, components, parts, or systems that are not in conformance to specified requirements at the Rancho Seco Nuclear Generating Station.

2.0 REFERENCED DOCUMENTS

2.1 10CFR50, Appendix B, Criterion XV, Nonconforming Materials, Parts or Components

2.2 ANSI N45.2-1971, Section 16, Nonconforming Items

3.0 POLICY

Procedures shall be established and implemented to assure that control of materials, parts or components which do not conform to specified requirements are controlled to prevent their inadvertent use or installation.

4.0 GENERAL REQUIREMENTS

4.1 Procedures shall be developed for controlling, documenting, and resolving items, services or activities identified as nonconforming.

4.2 Nonconforming items shall be identified by marking, tagging, segregating, or other means.

4.3 Nonconformances shall be documented, processed, controlled and retained to provide records of the action which was taken to resolve the nonconforming condition.

4.4 Appropriate levels of management will approve the disposition and technical justification of all dispositions.

4.5 The nonconformance program shall receive the attention of management personnel to assure prompt closure of nonconformances in their area of responsibility.

4.6 Trending shall be used as a mechanism for providing management
4→← information on programmatic or other significant deficiencies.

4.7 Nonconformances shall be reviewed to determine if they are potentially reportable per 10CFR21.

5.0 **RESPONSIBILITIES**

General organizational responsibilities are described in Section I, ORGANIZATION.

5.1 The Manager, Nuclear Quality & Industrial Safety is responsible for:

a. Establishing methods for controlling and documenting nonconformances.

b. Serving on the Engineering Review Board.

5.2 The Manager, Nuclear Technical Services is responsible for:

a. Ensuring engineering expertise is available to disposition nonconformances.

b. Developing safety analyses that address the nonconforming condition.

c. Serving on the Engineering Review Board.

5.3 The Manager, Nuclear Plant is responsible for:

4→← a. Taking appropriate action to ensure operation of the plant in conformance to license requirements when a nonconformance identifies a condition prohibiting components, structures, or systems from returning to an acceptable condition.

b. Determining the safety significance of the nonconforming condition on the status of the plant.

4→←

4→ 5.4 The Nuclear Operations Manager is responsible for:

← a. Serving on the Engineering Review Board.

XVI. CORRECTIVE ACTION

1.0 PURPOSE

This section describes the Quality Program measures established to provide for a corrective action program to assure that conditions adverse to quality are promptly identified and corrected at the Rancho Seco Nuclear Generating Station.

2.0 REFERENCE DOCUMENTS

2.1 10CFR50, Appendix B, Criterion XVI, Corrective Action

2.2 ANSI N45.2-1971, Section 17, Corrective Action

3.0 POLICY

Procedures shall be established and implemented to assure that significant conditions adverse to quality are identified and that corrective action is taken to preclude repetition.

4.0 GENERAL REQUIREMENTS

4.1 Controls shall assure conditions adverse to quality such as malfunctions, errors, deficiencies or nonconformances are identified, documented and appropriate corrective action taken. The controls shall assure that the corrective action is implemented in a timely manner.

4.2 For significant conditions adverse to quality, corrective action includes determining the cause and extent of the condition, taking corrective action to remedy the condition and taking action to prevent recurrence. These actions shall be reported to management personnel for review and assessment.

4.3 Conditions adverse to quality are evaluated to determine if they are potentially reportable per 10CFR21 or 10CFR50.73.

5.0 **RESPONSIBILITIES**

General organizational responsibilities are described in Section I, ORGANIZATION.

5.1 The Managers, of each department are responsible for:

a. Formulation of appropriate corrective actions as they apply to their departments.

b. Implementation of proposed corrective action.

c. Assuring that proposed corrective action is effective.

5.2 The Manager, Nuclear Quality & Industrial Safety is responsible for:

a. Monitoring the corrective action program.

b. Verifying the effectiveness of corrective actions.

c. Providing information to management which describes the effectiveness of the Quality Program.

XVII. QUALITY ASSURANCE RECORDS

1.0 PURPOSE

This section describes the Quality Program measures established for the storage and maintenance of Quality Assurance Records which provide the documentary evidence of activities affecting quality performed at Rancho Seco Nuclear Generating Station.

2.0 REFERENCE DOCUMENTS

2.1 10CFR50, Appendix B, Criterion XVII, Quality Assurance Records

2.2 ANSI N45.2-1971, Section 18, Quality Assurance Records

2.3 Safety Guide 33/ANSI N18.7, Administrative Control for Nuclear Power Plants, para 5.2

2.4 RG1.28/ANSI/ASME, NQA-1-1983, Supplement 17S-1, Supplementary Requirements for Quality Assurance Records with exceptions noted in Section II of this manual.

4++ 2.5 Technical Specifications Section 6.0

3.0 POLICY

Procedures shall be established and implemented to assure storage and maintenance of records including those required by Technical Specifications that represent the objective evidence of the quality related activities performed at Rancho Seco.

4.0 GENERAL REQUIREMENTS

4.1 Quality Assurance records shall be retained in a facility that meets the requirements of Ref. 2.4.

4.2 Quality Assurance Records shall be protected by interim (not to exceed 120 days) storage in NFPA Class C one hour file cabinets rated by Underwriter's Laboratory or equivalent until they are transferred to the Records Information Center for permanent storage.

4.3 Documents that furnish evidence of the quality of items and services are generated and controlled in accordance with the procedures that govern those activities. Such documents are considered Quality Assurance Records upon completion. Quality Assurance Records are considered completed when they have been stamped, initialed or signed and dated by authorized personnel or otherwise authenticated.

4.4 The record system shall provide for identification and retrievability of the records to the extent that information can be obtained in a reasonable amount of time.

4.5 The records program shall address records classification (Lifetime or Nonpermanent), retention time, storage location and personnel assigned responsibility for retention and retrievability.

4.6 The conditions of storage shall be established to provide assurance that the records will be useable for the designated period of retention.

4.7 A records retention schedule shall be established which addresses
4↔ the requirements of Ref. 2.4 and 2.5.

5.0 **RESPONSIBILITIES**

General organizational responsibilities are described in Section I, ORGANIZATION

5.1 The Supervisor, Records Management is responsible for:

a. Establishing methods for control of records.

b. Providing administrative procedures which define the records storage program and provide for ready retrievability.

5.2 The Managers of each department are responsible for:

a. Transmitting completed records to Records Management Department.

4↔ b. Providing interim storage in accordance with Section 4.2, prior to transmittal to Records Management.

5.3 The Manager, Nuclear Quality & Industrial Safety is responsible for:

a. Conducting audits in accordance with Section XVIII of this manual of the records management system to assure conformance to specified requirements.

XVIII. AUDITS

1.0 PURPOSE

This section describes the Quality Program measures established for a comprehensive system of planned and periodic audits to determine the effectiveness of the Quality Program at the Rancho Seco Nuclear Generating Station.

2.0 REFERENCE DOCUMENTS

2.1 10CFR50, Appendix B, Criterion XVIII, Audits

2.2 Safety Guide 33/ANSI N18.7, Administrative Controls for Nuclear Power Plants

2.3 Reg. Guide 1.144/ANSI N45.2.12-1977, Requirements for Auditing of Quality Assurance Programs for Nuclear Power Plants

2.4 Reg Guide 1.146/ANSI N45.2.23-1978, Qualification of Quality Assurance Program Audit Personnel for Nuclear Power Plants

2.5 Technical Specifications, Section 6.0

3.0 POLICY

Procedures shall be established and implemented to assure that planned and periodic audits are conducted to verify compliance with all aspects of the Rancho Seco Quality Program and Technical Specifications.

4.0 GENERAL REQUIREMENTS

4.1 The Manager, Nuclear Quality and Industrial Safety shall establish a schedule for auditing the activities affecting quality. The audit schedule shall be consistent with the Technical Specification requirements at Rancho Seco.

4.2 The audit program shall be described in procedures which implement the requirements of this section.

4.3 Audits shall be conducted to determine the adequacy and effectiveness of programs implemented for the design, procurement, modification, maintenance and operational activities at Rancho Seco.

4.4 Audit plans shall be developed which identify the audit scope, the requirements, activities to be audited, organizations to be notified, the applicable documents, the audit schedule, and the audit checklists.

4.5 Audit reports shall be issued which identify the activity which was audited, personnel contacted during the audit, any findings or observations noted during the audit, the organizations responsible for providing the response to audit findings, and the scheduled date for receiving replies to findings identified.

4.6 Response to audit findings shall be prompt, pertinent to the area of concern, and shall address corrective action to prevent recurrence.

4.7 Followup action to assure implementation and assess the effectiveness of corrective action shall be taken. Appropriate followup action shall include review of objective evidence or reaudit of deficient areas.

4.8 Personnel conducting audits shall be trained and qualified in accordance with Reference 2.4.

4.9 Regularly scheduled audits shall be supplemented by special audits when conditions which warrant special audits exist. The conditions include:

a. Significant changes are made in the quality assurance program.

b. When it is suspected that an activity has adversely affected quality.

c. When an independent assessment of program effectiveness is considered appropriate.

5.0 **RESPONSIBILITIES**

General organizational responsibilities are described in Section I, ORGANIZATION.

5.1 The Manager, Nuclear Quality & Industrial Safety is responsible for:

a. Establishing a schedule for performance of required audits.

b. Reviewing audit results to evaluate the effectiveness of the Quality Program.

c. Implementation of the established audit program.

d. Training and qualification of audit personnel.

e. Tracking of audits to assure prompt response and timely closure of audit findings

f. Preparation of trend analysis data.

5.2 The manager of each department is responsible for:

a. Supporting the audit activities.

b. Providing prompt response to any audit deficiencies identified in the audit.