South Carolina Electric & Gas Co.

Policy Statement

South Carolina Electric & Gas Co. (SCE&G) shall design, procure, and operate the V. C. Summer nuclear plant in a manner that will ensure the health and safety of the public and workers. These activities shall be performed in compliance with the requirements of the Code of Federal Regulations (CFR), the applicable Nuclear Regulatory Commission (NRC) Facility Operating Licenses, and applicable laws and regulations of the state and local governments.

The SCE&G Quality Assurance Program (QAP) is the Quality Assurance Program Description (QAPD) provided in this document and the associated implementing documents. Together they provide for control of SCE&G activities that affect the quality of safety-related nuclear plant structures, systems, and components (SSCs) and include all planned and systematic activities necessary to provide adequate confidence that such SSCs will perform satisfactorily in service. The QAPD may also be applied to certain equipment and activities that are not safety-related, but support safe plant operations, or where other NRC guidance establishes program requirements.

The QAPD is the top-level policy document that establishes the manner in which quality is to be achieved and presents SCE&G's overall philosophy regarding achievement and assurance of quality. Implementing documents assign more detailed responsibilities and requirements and define the organizational interfaces involved in conducting activities within the scope of the QAP. Compliance with the QAPD and implementing documents is mandatory for personnel directly or indirectly associated with implementation of the SCE&G QAP.

_____ Date:_____

K. B. Marsh
President / COO

TABLE OF CONTENTS

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PART I INTRODUCTION

SECTION 1 GENERAL

SCE&G's Operational Phase Quality Assurance Program Description (QAPD) is the top-level policy document that establishes the quality assurance policy and assigns major functional responsibilities for operations activities conducted by or for SCE&G. Organizations within SCE&G Nuclear Operations support New Nuclear Deployment through implementing and supporting the QAPD. The QAPD describes the methods and establishes quality assurance (QA) and administrative control requirements that meet 10 CFR 50, Appendix B. The QAPD is based on the requirements and recommendations of ASME NQA-1-1994, "Quality Assurance Requirements for Nuclear Facility Applications," Parts I, II, and III, as specified in this document.~~SCE&G's Operational Phase Quality Assurance Program Description (QAPD) is the top-level policy document that establishes the quality assurance policy and assigns major functional responsibilities for operations activities conducted by or for SCE&G. The QAPD describes the methods and establishes quality assurance (QA) and administrative control requirements that meet 10 CFR 50, Appendix B. The QAPD is based on the requirements and recommendations of ASME NQA-1-1994, "Quality Assurance Requirements for Nuclear Facility Applications," Parts I, II, and III, as specified in this document.~~

The QA Program (QAP) is defined by the NRC-approved regulatory document that describes the QA elements (i.e. the QAPD), along with the associated implementing documents. Procedures and instructions that control Operational Phase activities were or will be developed prior to commencement of those activities. Policies establish high-level responsibilities and authority for carrying out important administrative functions which are outside the scope of the QAPD. Procedures establish practices for certain activities which are common to all SCE&G organizations performing those activities so that the activity is controlled and carried out in a manner that meets QAPD requirements. Procedures specific to a site, organization, or group establish detailed implementation requirements and methods, and may be used to implement policies or be unique to particular functions or work activities.

1.1 Scope / Applicability

The QAPD applies to operational phase activities affecting the quality and performance of safety-related structures, systems, and components, including, but not limited to:

Designing	Storing	Operating
Maintaining	Procuring	Erecting
Repairing	Fabricating	Installing
Modifying	Cleaning	Inspecting
Refueling	Handling	Testing
Training	Shipping	Startup
Decommissioning	Receiving	

Safety-related SSCs, under the control of the QAPD, are identified by design documents. The technical aspects of these items are considered when determining program applicability, including, as appropriate, the item's design safety function. The QAPD may be applied to certain activities where regulations other than 10 CFR 50 establish QA requirements for activities within their scope.

The policy of SCE&G is to assure a high degree of availability and reliability of the V. C. Summer Nuclear Station Unit 1 while ensuring the health and safety of its workers and the public. To this end, selected elements of the QAPD are also applied to certain equipment and activities that are not safety-related, but

support safe, economic, and reliable plant operations, or where other NRC guidance establishes quality assurance requirements. Implementing documents establish program element applicability.

The definitions provided in ASME NQA-1–1994, Part I, Section 1.4, apply to select terms as used in this document. Additional definitions are provided in Part V, Section 1.0 of this QAPD.

PART II QAPD DETAILS

SECTION 1 ORGANIZATION

This Section describes the SCE&G organizational structure, functional responsibilities, levels of authority and interfaces for establishing, executing, and verifying QAPD implementation. The organizational structure includes Corporate Support/off-site and on-site functions for Nuclear Plant Operations including interface responsibilities for multiple organizations that perform quality-related functions. Implementing documents assign more specific responsibilities and duties, and define the organizational interfaces involved in conducting activities and duties within the scope of the QAPD. Management gives careful consideration to the timing, extent and effects of organizational structure changes.

SCE&G Vice President Nuclear Operations (VPNO) is responsible to size the Quality Assurance organization commensurate with the duties and responsibilities assigned.

The SCE&G Nuclear Operations organization is responsible for implementing and supporting the QAPD. Several organizations within SCE&G Nuclear Operations support New Nuclear Development through implementing and supporting the QAPD. These organizations include, but are not limited to the Procurement Group, Engineering, Training, Security, Emergency Preparedness, and SCANA Corporate Services.

During the operating life of V. C. Summer Nuclear Station (VCSNS) Unit 1, SCE&G may delegate the work of executing portions of the QAPD. However; SCE&G shall retain the responsibility for its overall effectiveness.

Outside organizations that perform activities in support of the design, procurement, fabrication, modification, inspection, test or maintenance of the safety related SSCs of the plant are required to work under an approved QAPD.

The following sections describe the reporting relationships, functional responsibilities and authorities for organizations implementing and supporting the SCE&G QAP. The SCE&G Corporate Organization and the Operating Plant Management Organization are shown in Figures II.1-1 and II.1-2.

1.1 SCE&G Corporate Management Organization

1.1.1 SCANA Chief Executive Officer (CEO)

The Chief Executive Officer (CEO) has the ultimate responsibility for the safe and reliable operation of each nuclear unit owned and/or operated by SCE&G. The CEO is responsible for the overall direction and management of the corporation, and the execution of the company policies, activities, and affairs. The CEO is assisted by the Executive Vice President, Generation (EVPG), and other executive staff in the nuclear division of the corporation.

1.1.2 SCE&G President & Chief Operating Officer (COO)

As delegated from the CEO, the President & Chief Operating Officer (COO) is responsible for the design, construction, and operation of SCE&G's nuclear plants. The COO directs the EVPG, who in turn directs the Senior Vice President of Nuclear Operations.

1.1.3 Executive Vice President, Generation (EVPG)

The EVPG reports to the CEO through the COO. The EVPG is responsible for electric generation, overall plant nuclear safety, and takes the measures needed to provide acceptable performance of the staff in operating, maintaining, and providing technical support to the nuclear site. The EVPG delegates authority and responsibility for the operation and support of the site through the Senior Vice President, Nuclear Operations (SVP/CNO). It is the responsibility of the EVPG to provide guidance and direction such that safety-related activities, including engineering, construction, operations, operations support, maintenance, and planning, are performed following the guidelines of the quality assurance program. The EVPG is responsible for new nuclear plant licensing, design, and construction through the SVP/CNO.

1.1.4 Senior Vice President & Chief Nuclear Officer (SVP/CNO)

The SVP/CNO reports to the EVPG. The SVP/CNO serves as the Chief Nuclear Officer (CNO) and is responsible for the safe operation of all current nuclear plant operations along with the design, licensing, and construction of new nuclear plants. The SVP/CNO delegates authority and responsibility for the operation and support of the operating nuclear plants through the VPNO. The SVP/CNO is responsible for new nuclear plant licensing, design, and construction via the Vice President, New Nuclear Deployment (VPNND) who maintains control of nuclear plant construction through construction completion.

1.1.5 Vice President, Nuclear Operations (VPNO)

The Vice President, Nuclear Operations reports to the SVP/CNO and is responsible for the overall safe and efficient operation of VCSNS operating plants and for the implementation of quality assurance requirements in the areas specified by the QAPD.

1.1.6 Vice President, New Nuclear Deployment (VPNND)

The VPNND reports to the SVP/CNO and directs the planning and development of the NND staff and organizational resources. The VPNND is responsible for establishing and managing the Engineering, Procurement and Construction contract (EPC) for the development of new nuclear power plants.

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~~1.1.6~~1.1.7 Director, Nuclear Training

The Director, Nuclear Training, reports directly to the SVP/CNO and has the overall responsibility for the accredited and non-accredited training programs at VCSNS. This includes the responsibility for providing the required training for personnel within the VCSNS Unit 1. This position is responsible for the management of all nuclear learning programs for the VCSNS Unit 1. The position is also part of the Senior Management team that provides overall strategic direction for nuclear operations.

1.1.~~7~~6.1 Manager, Nuclear Training

The Manager, Nuclear Training, reports directly to the Director, Nuclear Training, and is responsible for the operations-related training programs. This includes the operation, certification, and coordination of the maintenance and modification of the VCSNS Simulators. This also includes training programs for manager/technical staff personnel, shift engineers/technical advisors, and licensed and non-licensed operators. The Manager, Nuclear Training, is also responsible for the maintenance and technical training programs for the V. C. Summer Nuclear Station. This includes training in the areas of Maintenance, Health Physics, Chemistry, and Engineering.

1.2 VCSNS Unit 1 Operating Plant Management Organization

The operating organization is responsible for keeping the VPNO abreast of plant conditions and verifying that the day to day operations of the plant are conducted safely and in accordance with all administrative controls including the QAPD.

1.2.1 General Manager, Nuclear Plant Operations (GMNPO)

The GMNPO reports to the VPNO, and is responsible for overall safe operation of the plant, and has control over those onsite activities necessary for safe operation and maintenance of the plant including operations, chemistry, maintenance, and modification. Additionally, the GMNPO has overall responsibility for occupational and public radiation safety. The GMNPO is the Chairman of the Plant Safety Review Committee (PSRC). The GMNPO is also referred to as the Plant Manager.

1.2.1.1 Manager, Operations

The Manager, Operations, is responsible for the day to day operation of the plant in a safe and efficient manner in compliance with the operating license. Manager, Operations is responsible for review and implementation of normal and emergency training and retraining programs. He/she has the assistance of the Operations Supervisor. In the absence of the Manager, Operations, the Operations Supervisor will assume his/her responsibilities.

1.2.1.2 Manager, Maintenance Services

The Manager, Maintenance Services, is responsible for establishing and implementing the programs for maintenance activities to ensure the continued safe, efficient, and reliable operation of the V. C. Summer Station. Manager, Maintenance Services is responsible to ensure the Station is maintained in compliance with company policies as they relate to Maintenance Services.

1.2.1.3 Manager, Chemistry Services

The Manager, Chemistry Services is responsible for directing and coordinating in-plant chemistry and water treatment programs.

The Manager, Chemistry Services, has the responsibility of supervising the Chemistry Supervisors and the Chemistry Specialists. Through this staff, the Manager, Chemistry Services is charged with implementing the chemistry programs, controlling non-rad releases, maintaining the quality of fluids in various plant systems within the prescribed limits, operating water treatment facilities, ensuring that written procedures within his/her scope of supervision reflect the criteria of performance standards established by regulatory agencies, and ensuring that these procedures are followed. He/she is responsible for ensuring that training and retraining of Chemistry personnel are performed as scheduled by the Nuclear Training Department. The Chemistry Specialists, under the direction of the Chemistry Supervisors, perform tasks incident to the categories of work implemented by the Manager, Chemistry Services.

1.2.1.4 Manager, Health Physics and Safety Services

The Manager, Health Physics and Safety Services (MHPSS), is responsible for directing and coordinating station health physics and radwaste programs. In addition, the MHPSS establishes occupational safety and health policy as well as providing technical support to plant staff concerning occupational health and safety issues.

The MHPSS is responsible for directing and coordinating health physics, count room and radwaste processing, environmental monitoring, and dosimetry activities. He/she plans, coordinates and / or directs supportive station activities with regard to the Radiation Protection, Radiological Effluent Control, Environmental Surveillance, Dosimetry, Radwaste Processing and Disposal, and Analytical programs. Through evaluations, he/she advises management on program status issues related to these programs and technical guidance for issue resolution. He/she has direct access to the General Manager, Nuclear Plant Operations for matters concerning any phase relative to radiological protection and occupational safety.

The MHPSS, has the responsibility of supervising the activities of the Health Physics Supervisors and the Health Physics Specialists as well as the subcontractor support. Through this staff, the Manager, HPSS is charged with controlling the exposure of plant personnel and the public to radiation, preventing the spread of radioactive contamination, ensuring that written procedures reflect the criteria for establishing performance standards, and ensuring that these procedures are followed. He/she is responsible for ensuring that training and retraining of health physics personnel are performed as well as providing health physics services, radiological engineering expertise, and periodic health physics reviews for all plant personnel. He/she is responsible for the timely submission of reports pertaining to health physics, radioactive waste releases to the environment, and other areas as required.

1.2.2 General Manager, Nuclear Support Services (GMNSS)

The GMNSS reports to the VPNO, and is overall responsible for Nuclear Licensing; Emergency Services; the Planning and Scheduling processes; Outage Planning; and the scheduling of modification, testing, and inspection activities.

The GMNSS is responsible for directing the Manager, Nuclear Licensing, to develop and maintain effective communications with and in response to regulatory authorities; directing the Manager, Emergency Services to ensure emergency plans, programs and procedures are being properly maintained and implemented to meet the requirements of SCE&G and the regulatory authorities; directing the Manager, Planning & Scheduling, to ensure that maintenance activities are properly planned to minimize unavailability of Safety-Related SSCs; and directing the Outage Manager to ensure that refueling outages are properly planned, scheduled, and executed.

1.2.2.1 Manager, Nuclear Licensing

The Manager, Nuclear Licensing is responsible for the development and implementation of the SCE&G nuclear licensing policy while ensuring that applicable safety and environmental regulatory standards are met. Additionally, the Manager, Nuclear Licensing is responsible for reviewing general safety questions, safety issues, and safety goals; Probabilistic Risk and Safety Analyses Programs, NRC industry issues and

vendor correspondence for insight on industry activities and practices, and evaluating the potential impact of generic regulatory issues. Working together with all SCE&G organizations, Manager, Nuclear Licensing coordinates the generation, amendment, and distribution of various licensing documents, such as the FSAR, and development of Licensee Event Reports (LERs) per 10CFR50.73 and other written reports required by regulations or the Operating License. As the principal interface with the Nuclear Regulatory Commission and other regulatory agencies, NL ensures that the respective directives, requests, and information documents are distributed to the proper organizations and that any necessary responses are developed and submitted within the prescribed time frame. Also reporting to the Manager, Nuclear Licensing is the PRA group. The PRA group is responsible for the development and maintenance of PRA models used to support risk informed applications and for providing risk insights to: processes which control risk informed applications, proposed changes to plant design and licensing basis, maintenance activities, and off normal plant events or conditions.

1.2.2.2 Manager, Planning & Scheduling

The Manager, Planning & Scheduling is responsible for the scheduling of maintenance, modification, test and inspection activities within the constraints imposed by operational, regulatory, and system load requirements.

1.2.2.3 Manager, Emergency ~~Services~~Planning

The Manager, Emergency ~~Services~~Planning is responsible for the effective planning, coordination, and management of the V. C. Summer Nuclear Plant Eemergency P~~p~~reparedness P~~p~~rogram. Additional responsibilities include ensur~~u~~ing that the emergency plans, programs, and procedures are being properly maintained and implemented to meet the requirements of SCE&G and the regulatory authorities.

1.2.2.4 Outage Manager

The Outage Manager is responsible for planning, scheduling, and executing refueling outages within the established outage schedule and budget.

1.2.2.5 Workweek Management

Workweek Management organization is responsible for and serves as primary organizational interface with outside organizations for management, engineering, planning and implementation of capital projects. The organization provides coordination and interface for resolving conflicts and delays for execution of activities as necessary for project implementation.

1.2.3 General Manager, Engineering Services (GMES)

The GMES is the onsite lead position for engineering and reports to the VPNO. The GMES is responsible for engineering activities related to the operation or maintenance of the plant and design change implementation support activities. The GMES directs functional managers responsible for plant support engineering, design engineering, and materials and procurement.

1.2.3.1 Manager, Design Engineering

The Manager, Design Engineering is responsible for resolving design issues, onsite development of design-related change packages and plant modifications, managing contractors who may perform design-related

activities, maintaining the configuration control program, and developing and maintaining engineering programs such as accident analysis activities and ISI.

The Nuclear Design and Analysis Engineers, who report to the Manager, Design Engineering, ensure that reactor engineering tests are performed in accordance with plant procedures and manuals and ensuring that current industry techniques are utilized to monitor and reduce megawatt loss. The Core Design Engineers are responsible for evaluating, designing, and managing core design changes.

1.2.3.2 Manager, Plant Support Engineering

The Manager, Plant Support Engineering supervises a technical staff of engineers and other engineering specialists and coordinates interfaces with other groups as necessary. The Manager, Plant Support Engineering is responsible for providing direction and guidance to system engineers for monitoring the efficiency and proper operation of balance of plant and reactor systems, planning programs for improving equipment performance, reliability, or work practices; overseeing operational tests and analyzing the results; and maintaining engineering programs such as IST, valve testing, maintenance rule, piping erosion/corrosion, and system/equipment reliability.

1.2.3.3 Manager, Materials & Procurement

The Manager, Materials & Procurement (MMPR) is responsible for all site purchasing activities, Supplier Quality Audits, Receipt Inspections, and Procurement Engineering functions. The MMPR is also responsible for providing sufficient and proper materials to support the needs of the plant and performing related activities including procedure development, procurement and materials storage, and supply system database management.

1.2.4 General Manager, Organizational Effectiveness (GMOE)

The GMOE reports to the VPNO. The GMOE directs managers responsible for Nuclear Protection Services, Quality Systems, overall coordination of station Information Systems Technology activities, Change Management, Organizational Development & Performance and Corrective Action Program, and supervisor for Records and Document Control. Additionally, the GMOE holds the position and responsibilities of Chairman of the Corrective Action Review Board.

1.2.4.1 Manager, Organizational Development & Performance

The Manager, Organizational Development & Performance (MOD&P), is responsible for directing and coordinating the station organizational effectiveness programs, to include human performance, operating experience, root cause, corrective action, self-assessment, management observation, trending and benchmarking programs to effectively develop and coordinate these programs to aid in the development of a strong learning organization and to promote continuous improvement.

The MOD&P, has the responsibility of supervising the Corrective Action Supervisor and Human Performance Supervisor. Through this staff, the MOD&P, is responsible for the implementation of the OD&P organizational effectiveness programs and ensuring written procedures accurately reflect the criteria for establishing performance standards and are adhered to. The incumbent is responsible for ensuring that training and retraining of the OD&P personnel is performed and providing OD&P expertise and service to the station. This incumbent establishes and maintains rapport with plant personnel, encouraging the reporting of problems and events that can adversely affect plant performance at the V. C. Summer Nuclear Station Unit 1.

The MOD&P, is responsible for performing OD&P improvement initiatives and assists in identifying and training of human error reduction techniques for all station employees. The incumbent develops and participates in activities to identify human error challenges and opportunities for improvement, communicates to the station results to be achieved and the part they play in obtaining them, facilitates group learning sessions with supervisors and managers to identify barriers, develops goals and measures for monitoring improvement plan results and provides results to management in periodic reports, tracks initiatives and assists in the development of measures for less than desirable results and ensures strong interfaces and exchanges of information exists with others involved in improvement activities to ensure effective integration of improvement efforts.

1.2.4.2 Manager, Nuclear Protection Services

The Manager, Nuclear Protection Services, is responsible for management control activities of Nuclear Security and the access control and fitness for duty program. Reporting to the Manager, Nuclear Protection Services, is the Supervisor, Operations Security, and the Supervisor, Access Control/Fitness For Duty.

The Manager, Nuclear Protection Services, is responsible for physical security, security force operations, training and qualification programs, and maintenance and testing activities for security equipment.

1.2.4.3 Manager, Quality Systems

The Manager, Quality Systems (MQS), is responsible for audit, surveillance, and inspection of Nuclear Operations activities to ensure that all safety-related activities are performed in accordance with a quality assurance program which meets the criteria of 10 CFR 50, Appendix B. Quality Assurance and Quality Control services may be subcontracted as needed. Further detail can be found in Section 18 of the QAPD. The MQS is responsible for independent oversight activities performed during refueling outages, startup activities, and normal and off-normal operational activities.

The responsibility for developing, maintaining and verifying effective implementation of the QAPD rests with the MQS. The MQS through the GMOE has the responsibility and authority to report quality matters to any management level necessary within SCE&G in order to establish timely and effective corrective action. The MQS is authorized by this QAPD to identify concerns adverse to quality directly to the VPNO.

1.2.4.4 Manager, Corporate Information and Systems Technology

The Manager, Corporate Information and Systems Technology reports through a dotted-line to the GMOE and is responsible for ensuring station computer operation and records applications are installed and maintained per approved procedures and working with departments to ensure regulatory compliance.

1.2.4.5 Supervisor Records, Documents, and Reproduction

The Supervisor Records, Documents, and Reproduction is responsible for providing for acceptable records storage systems and locations; obtaining, filing and maintaining auditable records; and maintenance of the Station document control program.

1.2.5 Manager, Business and Financial Services

The Manager, Business and Financial Services, is responsible for business and financial services and reports to the VPNO.

1.2.6 Corporate Services

The SCANA/SCE&G Corporate Services organizations are responsible for supporting the Nuclear Organization by performing activities related to accounting, safety and health, and environmental services where applicable. These organizations will serve the Nuclear Organization through "dotted-line" reporting to the Nuclear Organization managers.

1.3 Quality Assurance

The SCE&G Quality Assurance Organization is responsible for independently planning and performing activities to verify the development and effective implementation of the SCE&G QAPD, including but not limited to engineering, licensing, document control, corrective action program, and procurement that support the operational phase of the V. C Summer ~~n~~Nuclear ~~p~~Station. This verification of development and effective implementation of the SCE&G QAPD allows SCE&G Nuclear Operations to support New Nuclear Deployment activities~~.~~

1.4 Authority to Stop Work

Quality assurance and inspection personnel have the authority, and the responsibility, to stop work in progress which is not being done in accordance with approved procedures or where safety or SSC integrity may be jeopardized. This extends to off-site work performed by suppliers furnishing safety-related materials and services to SCE&G.

1.5 Quality Assurance Organizational Independence

For operational phase activities, independence shall be maintained between the organization or organizations performing the checking (quality assurance and control) functions and the organizations performing the functions. This provision is not applicable to design review / verification.

1.6 NQA-1-1994 Commitment

In establishing its organizational structure, SCE&G commits to compliance with NQA-1-1994, Basic Requirement 1 and Supplement 1S-1.

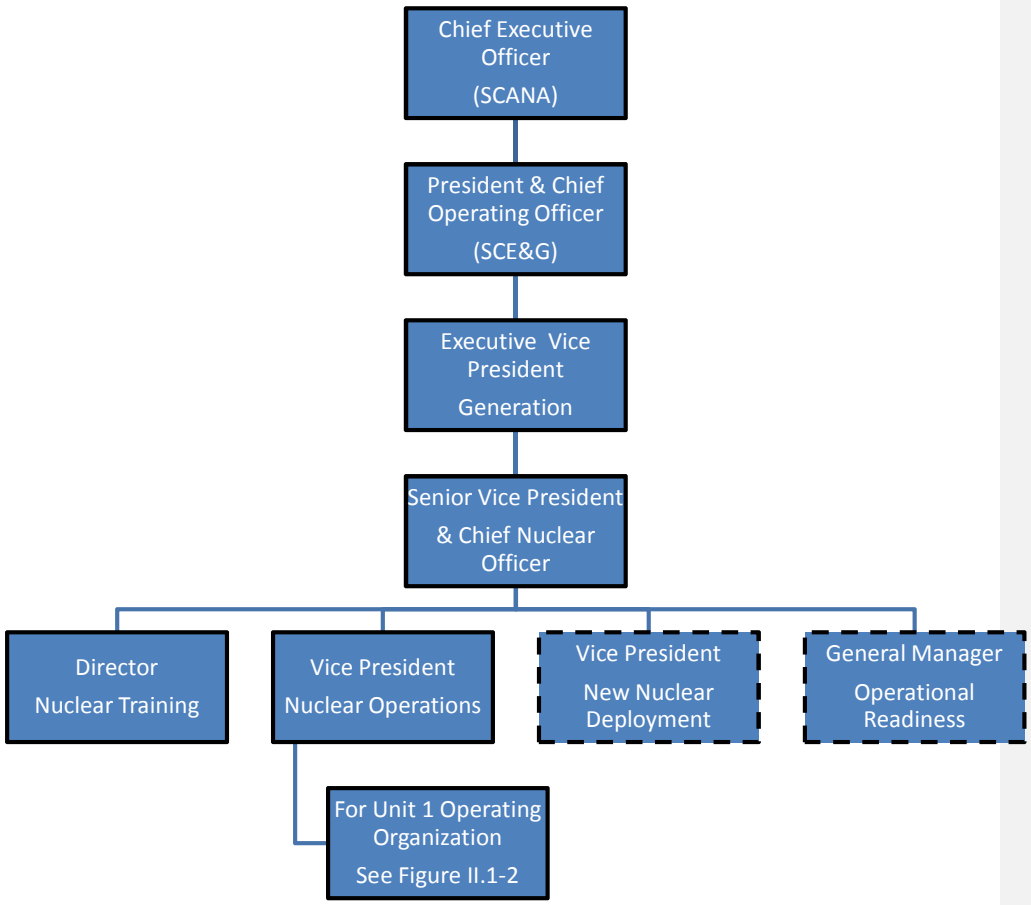

Figure II.1-1 SCE&G Corporate Organization

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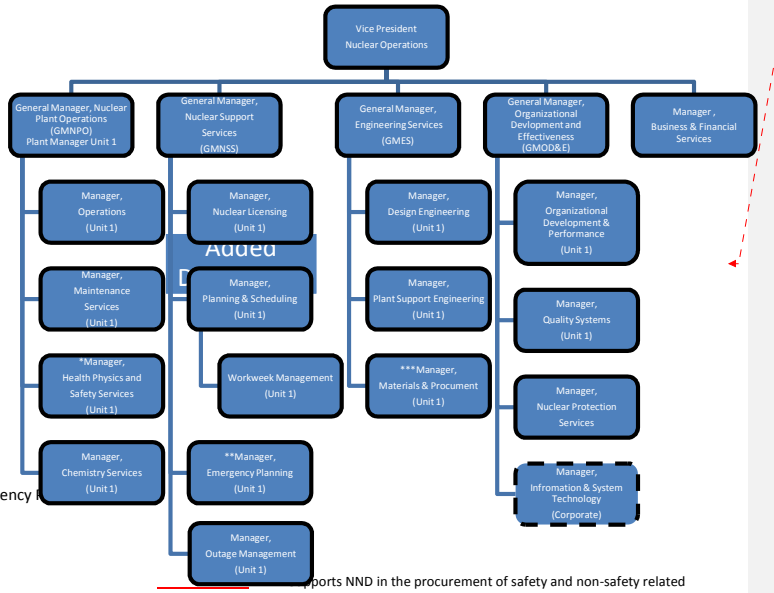
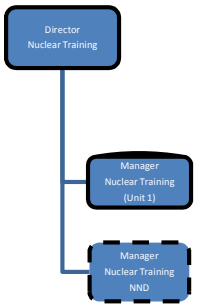


*Supports NND in participating on NEI AP1000 HP Task Force

** Supports NND in the area of Emergency

*** Supports NND in the procurement of safety and non-safety related materials, equipment, and services. Supports NND QS personnel in the performance of external activities by the participation of NUPIC audits to determine contractor/vendor conformance to their QA program.

~~**Figure II.1-2 Unit 1 Plant Management Organization**~~



*Supports NND in participating on NEI AP1000 HP Task Force

** Supports NND in the area of Emergency Planning

*** Supports NND in the procurement of safety and non-safety related materials, equipment, and services. Supports NND QS personnel in the performance of external activities by the participation of NUPIC audits to determine contractor/vendor conformance to their QA program.

Figure II.1-2 Unit 1 Plant Management Organization

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SECTION 2 QUALITY ASSURANCE PROGRAM

SCE&G has established the necessary measures and governing procedures to implement the QAP as described in the QAPD. SCE&G is committed to implementing the QAP in all aspects of work that are important to the safety of the nuclear plant as described and to the extent delineated in the QAPD. Further, SCE&G ensures through the systematic process described herein that its suppliers of safety-related equipment or services meet the applicable requirements of 10 CFR 50, Appendix B. Senior management is regularly apprised of the adequacy of implementation of the QAP through the audit functions described in Part II, Section 18.

The objective of the QAP is to assure that the V. C. Summer Nuclear Station Unit 1 is designed and operated in accordance with governing regulations and license requirements. The program is based on the requirements of ASME NQA-1-1994, "Quality Assurance Requirements for Nuclear Facility Applications," as further described in this document. The QAP applies to those quality-related activities that involve the functions of safety-related structures, systems, and components (SSCs) associated with the design, maintenance, testing, and safe operation of the nuclear facility and managerial and administrative controls as described in the Final Safety Analysis Report. A list or system that identifies SSCs and activities to which this program applies is maintained at the V. C. Summer Nuclear Station Unit 1. Cost and scheduling functions do not prevent proper implementation of the QAP.

As described in Part III of the QAPD, specific program controls are applied to non-safety related SSCs, for which 10 CFR 50, Appendix B, is not applicable, that are significant contributors to plant safety. The specific program controls consistent with applicable sections of the QAPD are applied to those items in a selected manner, targeted at those characteristics or critical attributes that render the SSC a significant contributor to plant safety.

Delegated responsibilities may be performed under a suppliers or principal contractors QAP, provided that the supplier or principle contractor has been approved as a supplier in accordance with the QAPD. Periodic audits and assessments of supplier QA programs are performed to assure compliance with the supplier's or principle contractors QAPD and implementing procedures. In addition, routine interfaces with the supplier's personnel provide added assurance that quality expectations are met.

For the operational phase, the QAPD applies to those operational and SCE&G activities that can affect, either directly or indirectly, the safety-related site characteristics or analysis of those characteristics.

In general, the program requirements specified herein are detailed in implementing procedures that are either SCE&G implementing procedures, or supplier implementing procedures governed by a supplier quality program.

A grace period of 90 days may be applied to provisions that are required to be performed on a periodic basis unless otherwise noted. Annual evaluations and audits that must be performed on a triennial basis are examples where the 90 day general period could be applied. The grace period does not allow the "clock" for a particular activity to be reset forward. The "clock" for an activity is reset backwards by performing the activity early. Audit schedules are based on the month in which the audit starts.

2.1 Responsibilities

Personnel who work directly or indirectly for SCE&G are responsible for achieving acceptable quality in the work covered by the QAPD. This includes the activities delineated in Part I, Section 1.1. SCE&G personnel performing verification activities are responsible for verifying the achievement of acceptable quality.

Activities governed by the QAPD are performed as directed by documented instructions, procedures and drawings that are of a detail appropriate for the activity's complexity and effect on safety. Instructions, procedures and drawings specify quantitative or qualitative acceptance criteria as applicable or appropriate for the activity, and verification is against these criteria. Provisions are established to designate or identify the proper documents to be used in an activity, and to ascertain that such documents are being used. The Manager, Quality Systems is responsible to verify that processes and procedures comply with QAPD and other applicable requirements, that such processes or procedures are implemented, and that management appropriately ensures compliance.

2.2 Delegation of Work

SCE&G retains and exercises the responsibility for the scope and implementation of an effective QAPD. Positions identified in Part II, Section I, may delegate all or part of the activities of planning, establishing, and implementing the program for which they are responsible to others, but retain the responsibility for the program's effectiveness. Decisions affecting safety are made at the level appropriate for its nature and effect, and with any necessary technical advice or review.

2.3 Periodic Review of the Quality Assurance Program

Management of those organizations implementing the QA program, or portions thereof, assess the adequacy of that part of the program for which they are responsible to assure its effective implementation at least once every two years or at least once during the life of the activity, whichever is shorter.

2.4 Issuance and Revision to Quality Assurance Program

Administrative control of the QAPD will be in accordance with 10 CFR 50.54(a). Changes to the QAPD are evaluated by the Manager, Quality Systems to ensure that such changes do not degrade previously approved quality assurance controls specified in the QAPD. This document shall be revised as appropriate to incorporate additional QA commitments that may be established during the operating life of the V. C. Summer Nuclear Station Unit 1. New revisions to the document will be reviewed, at a minimum, by the Manager, Quality Systems, and approved by the Senior Vice President, Nuclear Operations/CNO.

Regulations require that the Final Safety Analysis Report (FSAR) include, among other things, the managerial and administrative controls to be used to assure safe operation, including a discussion of how the applicable requirements of Appendix B will be satisfied. In order to comply with this requirement, the FSAR references the QAPD and, as a result, the requirements of 10 CFR 50.54(a) are satisfied by, and apply to, the QAPD.

2.5 Personnel Qualifications

Personnel assigned to implement elements of the QAPD shall be capable of performing their assigned tasks. To this end, SCE&G establishes and maintains formal indoctrination and training programs for personnel performing, verifying, or managing activities within the scope of the QAPD to assure that suitable proficiency is achieved and maintained. Plant and support staff minimum qualification requirements are as delineated in the V. C. Summer Technical Specifications. Other qualification requirements may be established but will not reduce those required by Technical Specifications. Sufficient managerial depth is provided to cover absences of incumbents. When required by code, regulation, or standard, specific qualification and selection of personnel is conducted in accordance with those requirements as established in the applicable SCE&G procedures. Indoctrination includes the administrative and technical objectives, requirements of the applicable codes and standards, and the QAPD elements to be employed. Training for positions identified in

10 CFR 50.120 is accomplished according to programs accredited by the National Nuclear Accrediting Board of the National Academy of Nuclear Training that implement a systematic approach to training. Records of personnel training and qualification are maintained.

The minimum qualifications of the Manager, Quality Systems are that he/she holds an engineering or related science degree and a minimum of four years of related experience including two years of nuclear power plant experience, one year of supervisory or management experience, and one year of the experience is in performing quality verification activities. Special requirements shall include management and supervisory skills and experience or training in leadership, interpersonal communication, management responsibilities, motivation of personnel, problem analysis and decision making, and administrative policies and procedures. Individuals who do not possess these formal education and minimum experience requirements should not be eliminated automatically when other factors provide sufficient demonstration of their abilities. These other factors are evaluated on a case-by-case basis and approved and documented by senior management.

The minimum qualifications of the individuals responsible for planning, implementing and maintaining the programs for the QAPD are that each has a high school diploma or equivalent and has a minimum of one year of related experience. Individuals who do not possess these formal education and minimum experience requirements should not be eliminated automatically when other factors provide sufficient demonstration of their abilities. These other factors are evaluated on a case-by-case basis and approved and documented by senior management.

2.6 NQA-1-1994 Commitment / Exceptions

In establishing qualification and training programs, SCE&G commits to compliance with NQA-1-1994, Basic Requirement 2 and Supplements 2S-1, 2S-2, 2S-3 and 2S-4, with the following clarifications and exceptions:

- **NQA-1-1994, Supplement 2S-1**

  - Supplement 2S-1 will include use of the guidance provided in Appendix 2A-1 the same as if it were part of the Supplement. The following two alternatives may be applied to the implementation of this Supplement and Appendix:

  (1) In lieu of being certified as Level l, II, or III in accordance with NQA-1-1994, personnel that perform independent quality verification inspections, examinations, measurements, or tests of material, products, or activities will be required to possess qualifications equal to or better than those required for performing the task being verified; and the verification is within the skills of these personnel and/or is addressed by procedures. These individuals will not be responsible for the planning of quality verification inspections and tests (i.e., establishing hold points and acceptance criteria in procedures, and determining who will be responsible for performing the inspections), evaluating inspection training programs, nor certifying inspection personnel.

  (2) A qualified engineer may be used to plan inspections, evaluate the capabilities of an inspector, or evaluate the training program for inspectors. For the purpose of these functions, a qualified engineer is one who has a baccalaureate in engineering in a discipline related to the inspection activity (such as electrical, mechanical, civil) and has a minimum of five years engineering work experience with at least two years of this experience related to nuclear facilities.
  ~~(2)~~

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- **NQA-1-1994, Supplement 2S-2**

  In lieu of Supplement 2S-2, for qualification of nondestructive examination personnel, SCE&G will follow the applicable standard cited in the version(s) of Section III and Section XI of the ASME Boiler and Pressure Vessel Code approved for use at the V. C. Summer Nuclear Station Unit 1.

- **NQA-1-1994, Supplement 2S-3**

  The requirement that prospective Lead Auditors have participated in a minimum of five (5) audits in the previous three (3) years is replaced by the following, "The prospective lead auditor shall demonstrate his/her ability to properly implement the audit process, as implemented by SCE&G, to effectively lead an audit team, and to effectively organize and report results, including participation in at least one nuclear audit within the year preceding the date of qualification."

SECTION 3 DESIGN CONTROL

SCE&G has established and implements a process to control the design, design changes and temporary modifications (e.g., temporary bypass lines, electrical jumpers and lifted wires, and temporary setpoints) of items that are subject to the provisions of the QAPD. The design process includes provisions to control design inputs, outputs, changes, interfaces, records and organizational interfaces within SCE&G and with suppliers. These provisions assure that design inputs (such as design bases and the performance, regulatory, quality, and quality verification requirements) are correctly translated into design outputs (such as analyses, specifications, drawings, procedures, and instructions) so that the final design output can be related to the design input in sufficient detail to permit verification. Design change processes and the division of responsibilities for design-related activities are detailed in SCE&G and supplier procedures. The design control program includes interface controls necessary to control the development, verification, approval, release, status, distribution, and revision of design inputs and outputs. Design changes and disposition of nonconforming items as "use as is" or "repair" are reviewed and approved by the SCE&G design organization or by other organizations so authorized by SCE&G.

Design documents are reviewed by individuals knowledgeable in QA to ensure the documents contain the necessary QA requirements.

3.1 Design Verification

SCE&G design processes provide for design verification to ensure that items and activities subject to the provisions of the QAPD are suitable for their intended application, consistent with their effect on safety. Design changes are subjected to these controls, which include verification measures commensurate with those applied to original plant design.

Design verifications are performed by competent individuals or groups other than those who performed the original design but who may be from the same organization. The verifier shall not have taken part in the selection of design inputs, the selection of design considerations, or the selection of a singular design approach, as applicable. This verification may be performed by the originator's supervisor provided the supervisor did not specify a singular design approach, rule out certain design considerations, and did not establish the design inputs used in the design, or if the supervisor is the only individual in the organization competent to perform the verification. If the verification is performed by the originator's supervisor, the justification of the need is documented and approved in advance by management.

The extent of the design verification required is a function of the importance to safety of the item under consideration, the complexity of the design, the degree of standardization, the state-of-the- art, and the similarity with previously proven designs. This includes design inputs, design outputs, and design changes. Design verification procedures are established and implemented to assure that an appropriate verification method is used, the appropriate design parameters to be verified are chosen, the acceptance criteria are identified, and the verification is satisfactorily accomplished and documented. Verification methods may include, but are not limited to, design reviews, alternative calculations and qualification testing. Testing used to verify the acceptability of a specific design feature demonstrates acceptable performance under conditions that simulate the most adverse design conditions expected for item's intended use.

SCE&G normally completes design verification activities before the design outputs are used by other organizations for design work, and before they are used to support other activities such as procurement, manufacture, or installation. When such timing cannot be achieved, the design verification is completed before relying on the item to perform its intended design or safety function.

3.2 Design Records

SCE&G maintains records sufficient to provide evidence that the design was properly accomplished. These records include the final design output and any revisions thereto, as well as record of the important design steps (e.g., calculations, analyses and computer programs) and the sources of input that support the final output.

Plant design drawings reflect the properly reviewed and approved configuration of the plant.

3.3 Computer Application and Digital Equipment Software

The QAPD governs the development, procurement, testing, maintenance, and use of computer application and digital equipment software when used in safety-related applications and designated non-safety-related applications. SCE&G and suppliers are responsible for developing, approving, and issuing procedures, as necessary, to control the use of such computer application and digital equipment software. The procedures require that the application software be assigned a proper quality classification and that the associated quality requirements be consistent with this classification. Each application software and revision thereto is documented and approved by authorized personnel. The QAPD is also applicable to the administrative functions associated with the maintenance and security of computer hardware where such functions are considered essential in order to comply with other QAPD requirements such as QA records.

3.4 Setpoint Control

Instrument and equipment setpoints that could affect nuclear safety shall be controlled in accordance with written instructions. As a minimum, these written instructions shall:

1. Identify responsibilities and processes for reviewing, approving, and revising setpoints and setpoint changes originally supplied by the A/E for V. C. Summer Nuclear Station Unit 1 and the plant's technical staff;
2. Ensure that setpoints and setpoint changes are consistent with design and accident analysis requirements and assumptions;
3. Provide for documentation of setpoints, including those determined operationally; and
4. Provide for access to necessary setpoint information for personnel who write or revise plant procedures, operate or maintain plant equipment, develop or revise design documents, or develop or revise accident analyses.

3.5 NQA-1-1994 Commitment

In establishing its program for design control and verification, SCE&G commits to compliance with NQA-1-1994, Basic Requirement 3, and Supplement 3S-1, and the standards for computer software contained in Subpart 2.7.

3.6 Design Control Commitment (Section 3)

The requirement that design documents are reviewed by individuals knowledgeable in QA to ensure the documents contain the necessary QA requirements is not applicable to VCSNS Operating Unit 1 as discussed in 10CFR50.34(f)(3)(iii)(H).

SECTION 4 PROCUREMENT DOCUMENT CONTROL

SCE&G has established the necessary measures and governing procedures to assure that purchased items and services are subject to appropriate quality and technical requirements. Procurement document changes shall be subject to the same degree of control as utilized in the preparation of the original documents. These controls include provisions such that:

• Where original technical or quality assurance requirements cannot be determined, an engineering evaluation is conducted and documented by qualified staff to establish appropriate requirements and controls to assure that interfaces, interchangeability, safety, fit, and function, as applicable, are not adversely affected or contrary to applicable regulatory requirements.

• Applicable technical, regulatory, administrative, quality and reporting requirements (such as specifications, codes, standards, tests, inspections, special processes, and 10 CFR 21) are invoked for procurement of items and services. 10 CFR 21 requirements for posting, evaluating, and reporting will be followed and imposed on suppliers when applicable. Applicable design bases and other requirements necessary to assure adequate quality shall be included or referenced in documents for procurement of items and services. To the extent necessary, procurement documents shall require suppliers to have a documented QA program that is determined to meet the applicable requirements of 10 CFR 50, Appendix B, as appropriate to the circumstances of procurements (or the supplier may work under SCE&G's approved QA program).

Reviews of procurement documents shall be performed by personnel who have access to pertinent information and who have an adequate understanding of the requirements and intent of the procurement documents.

4.1 NQA-1-1994 Commitment / Exceptions

In establishing controls for procurement, SCE&G commits to compliance with NQA-1-1994, Basic Requirement 4 and Supplement 4S-1, with the following clarifications and exceptions:

• NQA-1 -1994, Supplement 4S-1:

- Section 2.3 of this Supplement 4S-1 includes a requirement that procurement documents require suppliers to have a documented QAP that implements NQA-1-1994, Part I. In lieu of this requirement, SCE&G may require suppliers to have a documented supplier QAP that is determined to meet the applicable requirements of 10 CFR 50, Appendix B, as appropriate to the circumstances of the procurement;

- With regard to service performed by a supplier, SCE&G procurement documents may allow the supplier to work under the SCE&G QAP, including implementing procedures, in lieu of the supplier having its own QAP;

- Section 3 of this supplement 4S-1 requires procurement documents to be reviewed prior to bid or award of contract. The quality assurance review of procurement documents is satisfied through review of the applicable procurement specification, including the technical and quality procurement requirements, prior to bid or award of contract.

Procurement document changes (e.g., scope, technical or quality requirements) will also receive the quality assurance review; and

- Procurement documents for Commercial Grade Items that will be procured by SCE&G for use as safety-related items shall contain technical and quality requirements such that the procured item can be appropriately dedicated.

SECTION 5 INSTRUCTIONS, PROCEDURES, AND DRAWINGS

SCE&G has established the necessary measures and governing procedures to ensure that activities affecting quality are prescribed by and performed in accordance with instructions, procedures or drawings of a type appropriate to the circumstances and which, where applicable, include quantitative or qualitative acceptance criteria to implement the QAPD as described in the QAPD. Such documents are prepared and controlled according to Part II, Section 6. In addition, means are provided to disseminate to the staff instructions of both general and continuing applicability, as well as those of short-term applicability. Provisions are included for reviewing, updating, and canceling such procedures.

5.1 Procedure Adherence

SCE&G's policy is that procedures are followed, and the requirements for use of procedures have been established in administrative procedures. Where procedures cannot be followed as written, provisions are established for making changes in accordance with Part II, Section 6. Requirements are established to identify the manner in which procedures are to be implemented, including identification of those tasks that require: (1) the written procedure to be present and followed step-by-step while the task is being performed; (2) the user to have committed the procedure steps to memory; and (3) verification of completion of significant steps, by initials or signatures or use of check-off lists. Procedures that are required to be present and referred to directly are those developed for extensive or complex jobs where reliance on memory cannot be trusted, tasks that are infrequently performed, and tasks where steps must be performed in a specified sequence.

In cases of emergency, personnel are authorized to depart from approved procedures when necessary to prevent injury to personnel or damage to the plant. Such departures are recorded describing the prevailing conditions and reasons for the action taken.

5.2 Procedure Content

The established measures address the applicable content of procedures as described in the introduction to Part II of NQA-1-1994. In addition, procedures governing tests, inspections, operational activities and maintenance will include as applicable, initial conditions and prerequisites for the performance of the activity.

5.3 NQA-1-1994 Commitment

In establishing procedural controls, SCE&G commits to compliance with NQA-1-1994, Basic Requirement 5.

SECTION 6 DOCUMENT CONTROL

SCE&G has established the necessary measures and governing procedures to control the preparation of, issuance of, and changes to documents that specify quality requirements or prescribe how activities affecting quality, including organizational interfaces, are controlled to assure that correct documents are being employed. The control systems (including electronic systems used to make documents available) are documented and provide for the following:

(a) identification of documents to be controlled and their specified distribution;

(b) a method to identify the correct document (including revision) to be used and control of superseded documents;

(c) identification of assignment of responsibility for preparing, reviewing, approving, and issuing documents;

(d) review of documents for adequacy, completeness, and correctness prior to approval and issuance;

(e) a method for providing feedback from users to continually improve procedures and work instructions; and

(f) coordinating and controlling interface documents and procedures.

The types of documents to be controlled include:

(a) drawings, such as design, construction, installation, and as-built drawings;

(b) engineering calculations;

(c) design specifications;

(d) purchase orders and related documents;

(e) vendor-supplied documents;

(f) audit, surveillance, and quality verification/inspection procedures;

(g) inspection and test reports;

(h) instructions and procedures for activities covered by this QAPD including design, modification, installation, operating (including normal and emergency operations), maintenance, calibration, and routine testing ;

(i) technical specifications; and

(j) nonconformance reports and corrective action reports.

Where temporary procedures are used, they shall include a designation of the period of time during which it is acceptable to use them.

6.1 Review and Approval of Documents

Documents are reviewed for adequacy by qualified persons other than the preparer. Station Administrative Procedures, as identified by the Manager, Quality Systems, defining and/or implementing portions of the Quality Assurance Program, shall be reviewed by Quality Systems to ensure quality assurance measures have been appropriately applied. This documented review signifies concurrence.

Documents affecting the configuration or operation of the station as described in the FSAR are screened to identify those that require review by the PSRC prior to implementation as described in Part V, Section 2 of the QAPD.

To ensure effective and accurate procedures, applicable procedures are reviewed, and updated as necessary, based on the following conditions:

(a) following any modification to a system;

(b) following an unusual incident, such as an accident, significant operator error, or equipment malfunction;

(c) when procedure discrepancies are found;

(d) prior to use if not used in the previous two years; or

(e) results of QA audits conducted in accordance with Part II, Section 18.1.

Prior to issuance or use, documents including revisions thereto, are approved by the designated authority. A listing of all controlled documents identifying the current approved revision, or date, is maintained so personnel can readily determine the appropriate document for use.

6.2 Changes to Documents

Changes to documents, other than those defined in implementing procedures as minor changes, are reviewed and approved by the same organizations that performed the original review and approval unless other organizations are specifically designated. The reviewing organization has access to pertinent background data or information upon which to base their approval. Where temporary procedure changes are necessary, changes that clearly do not change the intent of the approved procedure may be implemented provided they are approved by two members of the staff knowledgeable in the areas affected by the procedures. Minor changes to documents, such as inconsequential editorial corrections, do not require that the revised documents receive the same review and approval as the original documents. To avoid a possible omission of a required review, the type of minor changes that do not require such a review and approval and the persons who can authorize such a classification shall be clearly delineated in implementing procedures.

6.3 NQA-1-1994 Commitment

In establishing provisions for document control, SCE&G commits to compliance with NQA-1-1994, Basic Requirement 6 and Supplement 6S-1.

6.4 Alternative Commitment To Biennial Review Of Procedures (Section 6.1(d))

VCSNS Unit 1 continues to implement an alternative commitment to performing biennial procedure reviews as documented in NRC Letter from Albert F. Gibson, Director Division of Reactor Safety to John L. Skolds, Vice President, Nuclear Operations dated 11/29/1990. This alternative commitment is described below:

The following programs and activities provide adequate procedure revision control and a method to verify the adequacy of these programs and activities:

- Plant Design Change Program
- Non-Conformance and Corrective Action Program
- Licensee Event Report System
- Operator Feedback Program
- Surveillance Test Program
- Operating Experience Review Program
- Technical Specification and FSAR Revision Process
- Corrective Actions for Regulatory Issues
- Quality Assurance Program
- Quality Assurance audit of the procedural development program using a representative sample process. The biennial audit will provide verification that the existing plant programs and activities listed above are effective in maintaining procedures current.

SECTION 7 CONTROL OF PURCHASED MATERIAL, EQUIPMENT, AND SERVICES

SCE&G has established the necessary measures and governing procedures to control the procurement of items and services to assure conformance with specified requirements. Such control provides for the following as appropriate: source evaluation and selection, evaluation of objective evidence of quality furnished by the supplier, source inspection, audit, and examination of items or services.

7.1 Acceptance of Item or Service

SCE&G establishes and implements measures to assess the quality of purchased items and services, whether purchased directly or through contractors, at intervals and to a depth consistent with the item or service's importance to safety, complexity, quantity, and the frequency of procurement. Verification actions include testing, as appropriate, during design, fabrication and operation activities. Verifications occur at the appropriate phases of the procurement process, including, as necessary, verification of activities of suppliers below the first tier.

Measures to assure the quality of purchased items and services include the following, as applicable:

- Items are inspected, identified, and stored to protect against damage, deterioration, or misuse.

- Prospective suppliers of safety-related items and services are evaluated to assure that only qualified suppliers are used. Qualified suppliers are audited on a triennial basis. In addition, if a subsequent contract or a contract modification significantly enlarges the scope of, or changes the methods or controls for activities performed by the same supplier, an audit of the modified requirements is conducted, thus starting a new triennial period. SCE&G may utilize audits conducted by outside organizations for supplier qualification provided that the scope and adequacy of the audits meet SCE&G requirements. Documented annual evaluations are performed for qualified suppliers to assure they continue to provide acceptable products and services. Industry programs, such as those applied by ASME, Nuclear Procurement Issues Committee (NUPIC), or other established utility groups, are used as input or the basis for supplier qualification whenever appropriate. The results of the reviews are promptly considered for effect on a supplier's continued qualification and adjustments made as necessary (including corrective actions, adjustments of supplier audit plans, and input to third party auditing entities, as warranted). In addition, results are reviewed periodically to determine if, as a whole, they constitute a significant condition adverse to quality requiring additional action.

- Provisions are made for accepting purchased items and services, such as source verification, receipt inspection, pre- and post-installation tests, certificates of conformance, and document reviews (including Certified Material Test Report/Certificate). Acceptance actions/documents should be established by the Purchaser with appropriate input from the Supplier and be completed to ensure that procurement, inspection, and test requirements, as applicable, have been satisfied before relying on the item to perform its intended safety function.

- Controls are imposed for the selection, determination of suitability for intended use (critical characteristics), evaluation, receipt, and acceptance of commercial-grade services or items to assure they will perform satisfactorily in service in safety-related applications.

- If there is insufficient evidence of implementation of a QA program, the initial evaluation is of the existence of a QA program addressing the scope of services to be provided. The initial audit is

performed after the supplier has completed sufficient work to demonstrate that its organization is implementing a QA program.

7.2 NQA-1-1994 Commitment/Exceptions

In establishing procurement verification controls, SCE&G commits to compliance with NQA-1-1994, Basic Requirement 7 and Supplement 7S-1, with the following clarifications and exceptions:

- NQA-1-1994, Supplement 7S-1

  - SCE&G considers that other 10 CFR 50 licensees, Authorized Nuclear Inspection Agencies, National Institute of Standards and Technology, or other State and Federal agencies which may provide items or services to the V. C. Summer plant are not required to be evaluated or audited.

  - When purchasing commercial grade calibration services from a calibration laboratory, procurement source evaluation and selection measures need not be performed provided each of the following conditions are met:

    (1) The purchase documents impose any additional technical and administrative requirements, as necessary, to comply with the SCE&G QA program and technical provisions. At a minimum, the purchase document shall require that the calibration certificate/report include identification of the laboratory equipment/standard used;

    (2) The purchase documents require reporting as-found calibration data when calibrated items are found to be out-of-tolerance; and

    (3) A documented review of the supplier's accreditation will be performed and will include a verification of the following:

      - The calibration laboratory is a domestic calibration service supplier.

      - The ~~The~~ calibration laboratory holds a domestic (United States) accreditation by any one of the following accrediting bodies, which are recognized by the International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement (MRA):

        - National Voluntary Laboratory Accreditation Program (NVLAP), administered by the National Institute of Standards & Technology;

        - American Association for Laboratory Accreditation (A2LA);

        - ACLASS Accreditation Services (ACLASS);

        - International Accreditation Service (IAS);

- Laboratory Accreditation Bureau (L-A-B); or

- Other NRC-approved laboratory accrediting body.

• The accreditation encompasses ANSI ANS/ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories".

• The published scope of accreditation for the calibration laboratory covers the necessary measurement parameters, ranges, and uncertainties.

• Subsuppliers of calibration service suppliers are acceptable provided the above conditions are met.

- For Section 8.1, SCE&G considers documents that may be stored in approved electronic media under SCE&G or vendor control not physically located on the V. C. Summer Nuclear Station Unit 1 site, but are accessible from the site, as meeting the NQA-1 requirement for documents to be available at the site. The SCE&G records management system will provide for timely retrieval of necessary records.

- In lieu of the requirements of Section 10, Commercial Grade Items, controls for commercial grade items and services are established in SCE&G documents using 10 CFR 21 and the guidance of EPRI NP-5652 as discussed in Generic Letter 89-02 and Generic Letter 91-05.

- For commercial grade items, special quality verification requirements are established and described in SCE&G documents to provide the necessary assurance an item will perform satisfactorily in service. The SCE&G documents address determining the critical characteristics that ensure an item is suitable for its intended use, technical evaluation of the item, receipt requirements, and quality evaluation of the item.

- SCE&G will also use other appropriate approved regulatory means and controls to support SCE&G commercial grade dedication activities. SCE&G will assume 10 CFR 21 reporting responsibility for all items that SCE&G dedicates as safety-related.

Section 8 IDENTIFICATION AND CONTROL OF MATERIALS, PARTS, AND COMPONENTS

SCE&G has established the necessary measures and governing procedures to identify and control items to prevent the use of incorrect or defective items. This includes controls for consumable materials and items with limited shelf life. The identification of items is maintained throughout fabrication, erection, installation and use so that the item can be traced to its documentation, consistent with the item's effect on safety. Identification locations and methods are selected so as not to affect the function or quality of the item.

8.1 NQA-1-1994 Commitment

In establishing provisions for identification and control of items, SCE&G commits to compliance with NQA-1-1994, Basic Requirement 8 and Supplement 8S-1.

SECTION 9 CONTROL OF SPECIAL PROCESSES

SCE&G has established the necessary measures and governing procedures to assure that special processes that require interim process controls to assure quality, such as welding, heat treating, and nondestructive examination, are controlled. These provisions include assuring that special processes are accomplished by qualified personnel using qualified procedures and equipment. Personnel are qualified and special processes are performed in accordance with applicable codes, standards, specifications, criteria or other specially established requirements. Special processes are those where the results are highly dependent on the control of the process or the skill of the operator, or both, and for which the specified quality cannot be fully and readily determined by inspection or test of the final product.

9.1 NQA-1-1994 Commitment

In establishing measures for the control of special processes, SCE&G commits to compliance with NQA-1-1994, Basic Requirement 9 and Supplement 9S-1.

SECTION 10 INSPECTION

SCE&G has established the necessary measures and governing procedures to implement inspections that assure items, services and activities affecting safety meet established requirements and conform to applicable documented specifications, instructions, procedures, and design documents. Inspection may also be applied to items, services, and activities affecting plant reliability and integrity. Types of inspections may include those verifications related to procurement, such as source, in-process, final, and receipt inspection, as well as installation, maintenance, modification, in-service, and operations activities. Inspections are carried out by properly qualified persons independent of those who performed or directly supervised the work. Inspection results are documented.

10.1 Inspection Program

The inspection program establishes inspections (including surveillance of processes), as necessary to verify quality: (1) at the source of supplied items or services, (2) in-process during fabrication at a Supplier's facility or at a Company Facility, (3) for final acceptance of fabricated and/or installed items, (4) upon receipt of items at the V. C. Summer Nuclear Station Unit 1, as well as (5) during maintenance, modification, in-service, and operating activities.

The inspection program establishes requirements for planning inspections, such as the group or discipline responsible for performing the inspection, where inspection hold points are to be applied, determining applicable acceptance criteria, the frequency of inspection to be applied, and identification of special tools needed to perform the inspection. Inspection planning is performed by personnel qualified in the discipline related to the inspection and includes qualified inspectors or engineers. Inspection plans are based on, as a minimum, the importance of the item to the safety of the facility, the complexity of the item, technical requirements to be met, and design specifications. Where significant changes in inspection activities are to occur, management responsible for the inspection programs evaluates the resource and planning requirements to ensure effective implementation of the inspection program.

Inspection program documents establish requirements for performing the planned inspections, and documenting required inspection information such as rejection, acceptance, and re-inspection results, and the person(s) performing the inspection.

Inspection results are documented by the inspector, reviewed by authorized personnel qualified to evaluate the technical adequacy of the inspection results, and are controlled by instructions, procedures, and drawings.

10.2 Inspector Qualification

SCE&G has established qualification programs for personnel performing quality inspections. The qualification program requirements are described in Part II, Section 2. These qualification programs are applied to individuals performing quality inspections regardless of the functional group where they are assigned.

10.3 NQA-1-1994 Commitment / Exceptions

In establishing inspection requirements, SCE&G commits to compliance with NQA-1-1994, Basic Requirement 10, Supplement 10S-1 and Subpart 2.4, with the following clarification. In addition, SCE&G commits to compliance with the requirements of Subparts 2.5 and 2.8 for establishing appropriate inspection requirements.

- Subpart 2.4 commits SCE&G to IEEE 336-1985. IEEE 336-1985 refers to IEEE 498- 1985. Both IEEE 336 -1985 and IEEE 498-1985 use the definition of "Safety Systems" from IEEE 603-1980. SCE&G commits to the definition of Safety Systems in IEEE 603- 1980, but does not commit to the balance of that standard. This definition is only applicable to equipment in the context of Subpart 2.4.

- An additional exception to Subpart 2.4 is addressed in Part II, Section 12 of the QAPD.

- Where inspections at the V. C. Summer Nuclear Facility are performed by persons within the same organization (e .g. Maintenance group), SCE&G takes exception to the requirements of NQA-1-1994, Supplement 10S-1, Section 3.1, the inspectors report to quality systems management while performing those inspections.

SECTION 11 TEST CONTROL

SCE&G has established the necessary measures and governing procedures to demonstrate that items subject to the provisions of the QAPD will perform satisfactorily in service, that the plant can be operated safely and as designed, and that the coordinated operation of the plant as a whole is satisfactory. These programs include criteria for determining when testing is required, such as proof tests before installation, post-maintenance tests, post-modification tests, in-service tests, and operational tests (such as surveillance tests required by Plant Technical Specifications), to demonstrate that performance of plant systems is in accordance with design. Programs also include provisions to establish and adjust test schedules and to maintain status for periodic or recurring tests. Tests are performed according to applicable procedures that include, consistent with the effect on safety, (1) instructions and prerequisites to perform the test, (2) use of proper test equipment, (3) acceptance criteria, and (4) mandatory verification points as necessary to confirm satisfactory test completion. Test results are documented and evaluated by the organization performing the test and reviewed by a responsible authority to assure that the test requirements have been satisfied. If acceptance criteria are not met, re-testing is performed as needed to confirm acceptability following correction of the system or equipment deficiencies that caused the failure.

Tests are performed and results documented in accordance with applicable technical and regulatory requirements, including those described in the Technical Specifications and FSAR. Test programs ensure appropriate retention of test data in accordance with the records requirements of the QAPD. Personnel that perform or evaluate tests are qualified in accordance with the requirements established in Part II, Section 2.

11.1 NQA-1-1994 Commitment

In establishing provisions for testing, SCE&G commits to compliance with NQA-1-1994, Basic Requirement 11 and Supplement 11S-1.

11.2 NQA-1-1994 Commitment for Computer Program Testing

SCE&G establishes and implements provisions to assure that computer software used in applications affecting safety is prepared, documented, verified and tested, and used such that the expected output is obtained and configuration control maintained. To this end SCE&G commits to compliance with the requirements of NQA-1-1994, Supplement 11S-2 and Subpart 2.7 to establish the appropriate provisions.

SECTION 12 CONTROL OF MEASURING AND TEST EQUIPMENT

SCE&G has established the necessary measures and governing procedures to control the calibration, maintenance, and use of measuring and test equipment (M&TE) that provides information important to safe plant operation. The provisions of such procedures cover equipment such as indicating and actuating instruments and gages, tools, reference and transfer standards, and nondestructive examination equipment. The suppliers of commercial grade calibration services are controlled as described in Part II, Section 7.

12.1 Installed Instrument and Control Devices

SCE&G has established and implements procedures for the calibration and adjustment of instrument and control devices installed in the facility. The calibration and adjustment of these devices is accomplished through the facility maintenance programs to ensure the facility is operated within design and technical requirements. Appropriate documentation will be maintained for these devices to indicate the control status, when the next calibration is due, and identify any limitations on use of the device.

12.2 NQA-1-1994 Commitment/Exceptions

In establishing provisions for control of measuring and test equipment, SCE&G commits to compliance with NQA-1-1994, Basic Requirement 12 and Supplement 12S-1 with the following clarification and exception:

- The out of calibration conditions described in paragraph 3.2 of Supplement 12S-1 refers to when the M&TE is found out of the required accuracy limits (i.e. out of tolerance) during calibration.

- Measuring and test equipment are not required to be marked with the calibration status where it is impossible or impractical due to equipment size or configuration (such as the label will interfere with operation of the device) provided the required information is maintained in suitable documentation traceable to the device. This exception also applies to the calibration labeling requirement stated in NQA-1-1994, Subpart 2.4, Section 7.2.1 (ANSI/IEEE Std. 336-1985).

SECTION 13 HANDLING, STORAGE, AND SHIPPING

SCE&G has established the necessary measures and governing procedures to control the handling, storage, packaging, shipping, cleaning, and preservation of items to prevent inadvertent damage or loss, and to minimize deterioration. These provisions include specific procedures, when required to maintain acceptable quality of the items important to the safe operations of the plant. Items are appropriately marked and labeled during packaging, shipping, handling, and storage to identify, maintain, and preserve the item's integrity and indicate the need for special controls. Special controls (such as containers, shock absorbers, accelerometers, inert gas atmospheres, specific moisture content levels, and temperature levels) are provided when required to maintain acceptable quality.

Special or additional handling, storage, shipping, cleaning, and preservation requirements are identified and implemented as specified in procurement documents and applicable procedures. Where special requirements are specified, the items and containers (where used) are suitably marked.

Special handling tools and equipment are used and controlled as necessary to ensure safe and adequate handling. Special handling tools and equipment are inspected and tested at specified time intervals and in accordance with procedures to verify that the tools and equipment are adequately maintained.

Operators of special handling and lifting equipment are experienced or trained in the use of the equipment. SCE&G establishes and implements controls over hoisting, rigging and transport activities to the extent necessary to protect the integrity of the items involved, as well as potentially affected nearby structures and components. Where required, SCE&G complies with applicable hoisting, rigging and transportation regulations and codes.

13.1 Housekeeping

Housekeeping practices are established to account for conditions or environments that could affect the quality of structures, systems and components within the plant. This includes control of cleanliness of facilities and materials, fire prevention and protection, disposal of combustible material and debris, control of access to work areas, protection of equipment, radioactive contamination control, and storage of solid radioactive waste. Housekeeping practices help assure that only proper materials, equipment, processes, and procedures are used and that the quality of items is not degraded. Necessary procedures or work instructions, such as for electrical bus and control center cleaning, cleaning of control consoles, and radioactive decontamination, are developed and used.

13.2 NQA-1-1994 Commitment / Exceptions

In establishing provisions for handling, storage and shipping, SCE&G commits to compliance with NQA-1-1994, Basic Requirement 13 and Supplement 13S-1. SCE&G also commits to compliance with the requirements of NQA-1- 1994, Subpart 2.1, Subpart 2.2, Subpart 2.3, and Subpart 3.2, Appendix 2.1, with the following clarifications and exceptions:

NQA-1-1994, Subpart 2.1

- Subpart 2.1, Section 3.1 and 3.2 establish criteria for classifying items into cleanness classes and requirements for each class. Instead of using the cleanness level system of Subpart 2.1, SCE&G may establish cleanness requirements on a case-by-case basis, consistent with the other provisions of Subpart 2.1. SCE&G establishes appropriate cleanliness controls for work on safety-related equipment to minimize introduction of foreign material and maintain system/component

cleanliness throughout maintenance or modification activities, including documented verification of absence of foreign material prior to system closure.

NQA-1-1994, Subpart 2.2

- Subpart 2.2, Section 2.2 establishes criteria for classifying items into protection levels. Instead of classifying items into protection levels, SCE&G may establish controls for the packaging, shipping, handling, and storage of such items on a case-by-case basis with due regard for the item's complexity, use, and sensitivity to damage. Prior to installation or use, the items are inspected and serviced as necessary to assure that no damage or deterioration exists which could affect their function.

- Subpart 2.2, Section 6.6, "Storage Records:" This section requires written records be prepared containing information on personnel access. As an alternative to this requirement, SCE&G documents establish controls for storage areas that describe those authorized to access areas and the requirements for recording access of personnel. However, these records of access are not considered quality records and will be retained in accordance with the administrative controls established for the V. C. Summer Nuclear Station Unit 1.

- Subpart 2.2, Section 7.1 refers to Subpart 2.15 for requirements related to handling of items. The scope of Subpart 2.15 includes hoisting, rigging and transporting of items for the nuclear power plants during construction.

NQA-1-1994, Subpart 2.3

- Subpart 2.3, Section 2.3 requires the establishment of five zone designations for housekeeping cleanliness controls. Instead of the five-level zone designation, SCE&G bases its control over housekeeping activities on a consideration of what is necessary and appropriate for the activity involved. The controls are implemented through procedures or instructions which, in the case of maintenance or modification work, are developed on a case-by-case basis. Factors considered in developing the procedures and instructions include cleanliness control, personnel safety, fire prevention and protection, radiation control and security. The procedures and instructions make use of standard janitorial and work practices to the extent possible.

NQA-1-1994, Subpart 3.2

- Subpart 3.2, Appendix 2.1: Only Section 3 precautions are being committed to in accordance with RG 1.37. In addition, a suitable chloride stress-cracking inhibitor should be added to the fresh water used to flush systems containing austenitic stainless steels.

SECTION 14 INSPECTION, TEST, AND OPERATING STATUS

SCE&G has established the necessary measures and governing procedures to identify the inspection, test, and operating status of items and components subject to the provisions of the QAPD in order to maintain personnel and reactor safety and avoid inadvertent operation of equipment. Where necessary to preclude inadvertent bypassing of inspections or tests, or to preclude inadvertent operation, these measures require the inspection, test or operating status be verified before release, fabrication, receipt, installation, test or use. These measures also establish the necessary authorities and controls for the application and removal of status indicators or labels.

In addition, temporary design changes (temporary modifications), such as temporary bypass lines, electrical jumpers and lifted wires, and temporary trip-point settings, are controlled by procedures or work instructions that include requirements for appropriate installation and removal, independent / concurrent verifications and status tracking.

Administrative procedures also describe the measures taken to control altering the sequence of required tests, inspections, and other operations. Review and approval for these actions is subject to the same control as taken during the original review and approval of tests, inspections, and other operations.

14.1 NQA-1-1994 Commitment

In establishing measures for control of inspection, test and operating status, SCE&G commits to compliance with NQA-1-1994, Basic Requirement 14.

SECTION 15 NONCONFORMING MATERIALS, PARTS, OR COMPONENTS

SCE&G has established the necessary measures and governing procedures to control items, including services that do not conform to specified requirements to prevent inadvertent installation or use. Instructions require that the individual discovering a nonconformance identify, describe, and document the nonconformance in accordance with the requirements of Part II, Section 16. Controls provide for identification, documentation, evaluation, segregation when practical, and disposition of nonconforming items, and for notification to affected organizations. Controls are provided to address conditional release of nonconforming items for use on an at-risk basis prior to resolution and disposition of the nonconformance, including maintaining identification of the item and documenting the basis for such release. Conditional release of nonconforming items for installation requires the approval of the designated management. Nonconformances are corrected or resolved prior to depending on the item to perform its intended safety function. Nonconformances are evaluated for impact on operability of quality structures, systems, and components to assure that the final condition does not adversely affect safety, operation, or maintenance of the item or service. Nonconformances to design requirements dispositioned repair or use-as-is, are subject to design control measures commensurate with those applied to the original design. Nonconformance dispositions are reviewed for adequacy, analysis of quality trends, and reports provided to the designated management. Significant trends are reported to management in accordance with SCE&G procedures, regulatory requirements, and industry standards.

15.1 Interface with the Reporting Program

SCE&G has appropriate interfaces between the QAP for identification and control of nonconforming materials, parts, or components and the non-QA Reporting Program to satisfy the requirements of 10 CFR 21 during operations.

15.2 NQA-1-1994 Commitment

In establishing measures for nonconforming materials, parts, or components, SCE&G commits to compliance with NQA-1 -1994, Basic Requirement 15, and Supplement 15S-1.

SECTION 16 CORRECTIVE ACTION

SCE&G has established the necessary measures and governing procedures to promptly identify, control, document, classify and correct conditions adverse to quality. SCE&G procedures assure that corrective actions are documented and initiated following the determination of conditions adverse to quality in accordance with regulatory requirements and applicable quality standards. SCE&G procedures require personnel to identify known conditions adverse to quality. When complex issues arise where it cannot be readily determined if a condition adverse to quality exists, SCE&G documents establish the requirements for documentation and timely evaluation of the issue. Reports of conditions adverse to quality are analyzed to identify trends. Significant conditions adverse to quality and significant adverse trends are documented and reported to responsible management. In the case of a significant condition adverse to quality, the cause is determined and actions to preclude recurrence are taken.

In the case of suppliers working on safety-related activities, or other similar situations, SCE&G may delegate specific responsibilities for corrective actions, but SCE&G maintains responsibility for the effectiveness of corrective action measures.

16.1 Interface with the Reporting Program

SCE&G has appropriate interfaces between the QAP for corrective actions and the non-QA Reporting Program to satisfy the requirements of 10 CFR 21 during operations.

16.2 NQA-1-1994 Commitment

In establishing provisions for corrective action, SCE&G commits to compliance with NQA-1-1994, Basic Requirement 16.

SECTION 17 QUALITY ASSURANCE RECORDS

SCE&G has the necessary measures and governing procedures to ensure that sufficient records of items and activities affecting quality are developed, reviewed, approved, issued, used, and revised to reflect completed work. The provisions of such procedures establish the scope of the records retention program for SCE&G and include requirements for records administration, including receipt, preservation, retention, storage, safekeeping, retrieval, access controls, user privileges, and final disposition.

17.1 Record Retention

Measures are established that ensure that sufficient records of completed items and activities affecting quality are appropriately stored. Records of activities for design, engineering, procurement, manufacturing, inspection and test, installation, operations, maintenance, modification, decommissioning, and audits and their retention times are defined in appropriate procedures. The records and retention times are based on construction records that are similar in nature based on Regulatory Position C.2 and Table 1 in Regulatory Guide 1.28, Revision 3. In all cases where state, local, or other agencies have more restrictive requirements for record retention, those requirements will be met.

17.2 Electronic Records

When using electronic records storage and retrieval systems, SCE&G complies with NRC guidance in Generic Letter 88-18, "Plant Record Storage on Optical Disks." SCE&G will manage the storage of QA Records in electronic media consistent with the intent of RIS 2000-18 and associated NIRMA Guidelines TG 11-1998, TG15-1998, TG16-1998, and TG21 -1998.

17.3 NQA-1-1994 Commitment / Exceptions

In establishing provisions for records, SCE&G commits to compliance with NQA-1-1994, Basic Requirement 17 and Supplement 17S-1, with the following clarifications and exceptions:

- NQA-1-1994, Supplement 17S-1

  - Supplement 17S-1, section 4.2(b) requires records to be firmly attached in binders or placed in folders or envelopes for storage in steel file cabinets or on shelving in containers. For hard-copy records maintained by SCE&G, the records are suitably stored in steel file cabinets or on shelving in containers, except that methods other than binders, folders or envelopes may be used to organize the records for storage.

SECTION 18 AUDITS

SCE&G has established the necessary measures and governing procedures to implement audits to verify that activities covered by the QAPD are performed in conformance with the requirements established. The audit programs are themselves reviewed for effectiveness as a part of the overall audit process.

18.1 Performance of Audits

Internal audits of selected aspects of licensing, design, and operating activities are performed with a frequency commensurate with safety significance and in a manner which assures that audits of safety-related activities are completed. Functional areas of an organization's QA program for auditing include, at a minimum, verification of compliance and effectiveness of implementation of internal rules, procedures (e .g., operating, design, procurement, maintenance, modification, refueling , surveillance, test, security, radiation control procedures, and the Emergency Plan), Technical Specifications, regulations and license conditions , programs for training, retraining , qualification and performance of operating staff, corrective actions, and observation of performance of operating, refueling, maintenance and modification activities, including associated record keeping.

The audits are scheduled on a formal preplanned audit schedule. The audit system is reviewed periodically and revised as necessary to assure coverage commensurate with current and planned activities. Additional audits may be performed as deemed necessary by management. The scope of the audit is determined by the quality status and safety Importance of the activities being performed. These audits are conducted by trained personnel not having direct responsibilities in the area being audited and in accordance with preplanned and approved audit plans or checklists, under the direction of a qualified lead auditor and the cognizance of the Manager, Quality Systems.

SCE&G is responsible for conducting periodic internal and external audits. Internal audits are conducted to determine the adequacy of programs and procedures (by representative sampling), and to determine if they are meaningful and comply with the overall QAPD. External audits determine the adequacy of supplier and contractor quality assurance program.

The results of each audit are reported in writing to the Senior Vice President, Nuclear Operations, or designee, as appropriate. Additional internal distribution is made to other concerned management levels in accordance with approved procedures.

Management responds to all audit findings and initiates corrective action where indicated. Where corrective action measures are indicated, documented follow-up of applicable areas through inspections, review, re-audits, or other appropriate means is conducted to verify implementation of assigned corrective action.

Audits of suppliers of safety-related components and/or services are conducted as described in Section 7.1.

18.2 Internal Audits

Internal audits of activities should be performed in such a manner as to assure that an audit of all applicable QA program elements is completed for each functional area within a period of two years. Internal audit frequencies of well established activities, conducted after placing the facility in operation, may be extended one year at a time beyond the above two-year interval based on the results of an annual evaluation of the applicable functional area and objective evidence that the functional area activities are being satisfactorily accomplished. The evaluation should include a detailed performance analysis of the functional area based

upon applicable internal and external source data and due consideration of the impact of any function area changes in responsibility, resources or management. However, the internal audit frequency interval should not exceed a maximum of four years. If an adverse trend is identified in the applicable functional area, the extension of the internal audit frequency interval should be rescinded and an audit scheduled as soon as practicable.

Audits are performed at a frequency commensurate with the safety significance of the activities and in such a manner to assure audits of all applicable QA program elements are completed within a period of two years. These audits will include, as a minimum, activities in the following areas:

(1) The conformance of facility operation to provisions contained within the Technical Specifications and applicable license conditions including administrative controls.

(2) The performance, training, and qualifications of the facility staff.

(3) The performance of activities required by the QAPD to meet the criteria of 10 CFR 50, Appendix B.

(4) The Fire Protection Program and implementing procedures. A fire protection equipment and program implementation inspection and audit are conducted utilizing either a qualified off-site licensed fire protection engineer or an outside qualified fire protection consultant.

(5) Other activities and documents considered appropriate by the Vice President, Nuclear Operations.

Audits may also be used to meet the periodic review requirements of the code for the Security, Emergency Preparedness, and Radiological Protection programs within the provisions of the applicable code.

Internal audits include verification of compliance and effectiveness of the administrative controls established for implementing the requirements of this QAPD; regulations and license provisions; provisions for training, retraining, qualification, and performance of personnel performing activities covered by this QAPD; corrective actions taken following abnormal occurrences; and observation of the performance of fabrication, operating, refueling, maintenance, and modification activities including associated record keeping.

18.3 NQA-1-1994 Commitment

In establishing the independent audit program, SCE&G commits to compliance with NQA-1-1994, Basic Requirement 18 and Supplement 18S-1.

PART III NON-SAFETY-RELATED SSC QUALITY CONTROL

SECTION 1 Non-safety-Related SSCs - Significant Contributors to Plant Safety

Specific program controls are applied to non-safety related SSCs, for which 10 CFR 50, Appendix B is not applicable, that are significant contributors to plant safety. The specific program controls consistent with applicable sections of the QAPD are applied to those items in a selected manner, targeted at those characteristics or critical attributes that render the SSC a significant contributor to plant safety.

The following clarify the applicability of the QA Program to the non-safety related SSCs and related activities, including the identification of exceptions to the QA Program described in Part II, Sections 1 through 18 taken for non-safety related SSCs.

1.1 Organization

The verification activities described in this Part may be performed by the SCE&G line organization. The QA organization described in Part II is not required to perform these functions.

1.2 QA Program

SCE&G QA requirements for non-safety related SSCs are established in the QAPD and appropriate procedures. Suppliers of these SSCs or related services describe the quality controls applied in appropriate procedures. A new or separate QA program is not required.

1.3 Design Control

SCE&G has established design control measures to ensure that the established design requirements are included in the design. These measures ensure that applicable design inputs are included or correctly translated into the design documents, and deviations from those requirements are controlled. Design verification is provided through the normal supervisory review of the designer's work.

1.4 Procurement Document Control

Procurement documents for items and services obtained by or for SCE&G shall include or reference documents describing applicable design bases, design requirements, and other requirements necessary to ensure component performance. The procurement documents are controlled to address deviations from the specified requirements.

1.5 Instructions, Procedures, and Drawings

SCE&G provides documents such as, but not limited to, written instructions, plant procedures, drawings, vendor technical manuals, and special instructions in work orders, to direct the performance of activities affecting quality. The method of instruction employed provides an appropriate degree of guidance to the personnel performing the activity to achieve acceptable functional performance of the SSC.

1.6 Document Control

SCE&G controls the issuance and change of documents that specify quality requirements or prescribe activities affecting quality to ensure that correct documents are used. These controls include review and approval of documents, identification of the appropriate revision for use, and measures to preclude the use of superseded or obsolete documents.

1.7 Control of Purchased Items and Services

SCE&G employs measures, such as inspection of items or documents upon receipt or acceptance testing, to ensure that all purchased items and services conform to appropriate procurement documents.

1.8 Identification and Control of Purchased Items

SCE&G employs measures where necessary, to identify purchased items and preserve their functional performance capability. Storage controls take into account appropriate environmental, maintenance, or shelf life restrictions for the items.

1.9 Control of Special Processes

SCE&G employs process and procedure controls for special processes, including welding, heat treating, and nondestructive testing. These controls are based on applicable codes, standards, specifications, criteria, or other special requirements for the special process.

1.10 Inspection

SCE&G uses documented instructions to ensure necessary inspections are performed to verify conformance of an item or activity to specified requirements or to verify that activities are satisfactorily accomplished. These inspections may be performed by knowledgeable personnel in the line organization. Knowledgeable personnel are from the same discipline and have experience related to the work being inspected.

1.11 Test Control

SCE&G employs measures to identify required testing that demonstrates that equipment conforms to design requirements. These tests are performed in accordance with test instructions or procedures. The test results are recorded, and authorized individuals evaluate the results to ensure that test requirements are met.

1.12 Control of Measuring and Test Equipment (M&TE)

SCE&G employs measures to control M&TE use, and calibration and adjustment at specific intervals or prior to use.

1.13 Handling, Storage, and Shipping

SCE&G employs measures to control the handling, storage, cleaning, packaging, shipping, and preservation of items to prevent damage or loss and to minimize deterioration. These measures include appropriate marking or labels, and identification of any special storage or handling requirements.

1.14 Inspection, Test, and Operating Status

SCE&G employs measures to identify items that have satisfactorily passed required tests and inspections and to indicate the status of inspection, test, and operability as appropriate.

1.15 Control of Nonconforming Items

SCE&G employs measures to identify and control items that do not conform to specified requirements to prevent their inadvertent installation or use.

1.16 Corrective Action

SCE&G employs measures to ensure that failures, malfunctions, deficiencies, deviations, defective components, and non-conformances are properly identified, reported, and corrected.

1.17 Records

SCE&G employs measures to ensure records are prepared and maintained to furnish evidence that the above requirements for design, procurement, document control, inspection, and test activities have been met.

1.18 Audits

SCE&G employs measures for line management to periodically review and document the adequacy of the process, including taking any necessary corrective action. Audits independent of line management are not required. Line management is responsible for determining whether reviews conducted by line management or audits conducted by any organization independent of line management are appropriate. If performed, audits are conducted and documented to verify compliance with design and procurement documents, instructions, procedures, drawings, and inspection and test activities. Where the measures of this Part III are implemented by the same programs, processes, or procedures as the comparable activities of Part II, the audits performed under the provisions of Part II may be used to satisfy the review requirements of this Part III, Section 1.18.

SECTION 2 Non-safety-Related SSCs Credited for Regulatory Events

The following criteria apply to fire protection (10 CFR 50.48), anticipated transients without scram (ATWS) (10 CFR 50.62), the station blackout (SBO) (10 CFR 50.63) SSCs that are not safety-related.

- SCE&G implements quality requirements for the Fire Protection System in accordance with Regulatory Position 1.7, “Quality Assurance,” in Regulatory Guide 1.189, Rev 2 “Fire Protection for Operating Nuclear Power Plants” as identified in FSAR Chapter 3, Appendix 3A.~~SCE&G implements quality requirements for the fire protection system in accordance with Section C to Appendix A of Branch Technical Position 9.5-1.~~

- SCE&G implements the quality requirements for ATWS equipment in accordance with Part III, Section 1.

- SCE&G implements quality requirements for SBO equipment in accordance with Regulatory Guide 1.155, "Station Blackout,” and Part III, Section 1.

PART IV REGULATORY COMMITMENTS

NRC Regulatory Guides and Quality Assurance Standards

This section identifies the NRC Regulatory Guides (RGs) and the other quality assurance standards which have been selected to supplement and support the SCE&G QAPD. SCE&G complies with these standards to the extent described or referenced herein. Commitment to a particular RG or standard does not constitute a commitment to the RGs or standards that may be referenced therein.

Regulatory Guides:

See FSAR Chapter 3 for the SCE&G evaluation of conformance with the guidance in NRC Regulatory Guides.

Regulatory Guide 1.8, Rev. 2, "Personnel Selection and Training," April 1987

Regulatory Guide 1.8 provides guidance that is acceptable to the NRC staff regarding qualifications and training for nuclear power plant personnel.

SCE&G identifies conformance and exceptions for the applicable regulatory position guidance provided in this regulatory guide in FSAR Chapter 3, Appendix 3A.

Regulatory Guide 1.26, Rev. 3,"Quality Group Classification and Standards for Water, Steam, and Radioactive-Waste-Containing Components of Nuclear Power Plants," February 1976

Regulatory Guide 1.26 defines classification of systems and components.

SCE&G identifies conformance and exceptions for the applicable regulatory position guidance provided in this regulatory guide in FSAR Chapter 3, Appendix 3A.

Regulatory Guide 1.28, Rev 3, "Quality Assurance Program Requirements (Design and Construction), August 1985

Regulatory Guide 1.28 describes a method acceptable to the NRC staff for complying with the provisions of Appendix B with regard to establishing and implementing the requisite quality assurance program for the design and construction of nuclear power plants.

SCE&G identifies conformance and exceptions for the applicable regulatory position guidance provided in this regulatory guide in FSAR Chapter 3, Appendix 3A.

Regulatory Guide 1.29, Rev. 2 for Comment, "Seismic Design Classification," February 1976

Regulatory Guide 1.29 defines systems required to withstand a safe shutdown earthquake (SSE).

SCE&G identifies conformance and exceptions for the applicable regulatory position guidance provided in this regulatory guide in FSAR Chapter 3, Appendix 3A.

Regulatory Guide 1.33, Rev. 2, February 1978, Quality Assurance Program Requirements (Operations)

Regulatory Guide 1.33 describes a method acceptable to the NRC staff for complying with the Commission's regulations with regard to overall quality assurance program requirements for the operation phase of nuclear power plants.

SCE&G identifies conformance and exceptions for the applicable regulatory position guidance provided in this regulatory guide in FSAR Chapter 3, Appendix 3A.

Regulatory Guide 1.37, Rev. 1, "Quality Assurance Requirements for Cleaning of Fluid Systems and Associated Components of Water-Cooled Nuclear Power Plants," March 2007.

Regulatory Guide 1.37 provides guidance on specifying water quality and precautions related to the use of alkaline cleaning solutions and chelating agents.

SCE&G identifies conformance and exceptions for the applicable regulatory position guidance provided in this regulatory guide in FSAR Chapter 3, Appendix 3A.

Regulatory Guide 1.54, Rev. 0, "Quality Assurance Requirements for Protective Coatings Applied to Water Cooled Nuclear Power Plants," June 1973

Regulatory Guide 1.54 provide guidance for the application of protective coatings within nuclear power plants to protect surfaces from corrosion, contamination from radionuclides, and for wear protection.

SCE&G identifies conformance and exceptions for the applicable regulatory position guidance provided in this regulatory guide in FSAR Chapter 3, Appendix 3A.

Standards:

ASME NQA-1-1994 Edition, Quality Assurance Requirements for Nuclear Facility Applications

SCE&G commits to NQA-1-1994, Parts I, II, and III, as described in Parts II and V of this document.

Nuclear Information and Records Management Association, Inc. (NIRMA) Technical Guides (TGs)

SCE&G commits to NIRMA TGs as described in Part II, Section 17.

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supervision: direction of personnel activities or monitoring of plant functions by an individual responsible and accountable for the activities they direct or monitor

surveillance testing: periodic testing to verify that safety related structures, systems, and components continue to function or are in a state of readiness to perform their functions

system: an integral part of nuclear power plant comprising components which may be operated or used as a separate entity to perform a specific function

Section 2 Review of Activities Affecting Safe Plant Operation

2.1 Onsite Operating Organization Review

The SCE&G onsite organization employs reviews, both periodic and as situations demand, to evaluate plant operations and plan future activities. The important elements of the reviews are documented and subjects of potential concern for the independent review described below are brought to the attention of the General Manager, Nuclear Plant Operations. The reviews are part of the normal duties of plant supervisory personnel in order to provide timely and continuing monitoring of operating activities in order to assist the General Manager, Nuclear Plant Operations in keeping abreast of general plant conditions and to verify that day-to-day operations are conducted safely in accordance with the established administrative controls. The General Manager, Nuclear Plant Operations ensures the timely referral of the applicable matters discussed in the reviews to appropriate management and independent reviewers.

2.2 Independent Review

Activities occurring during the operational phase shall be independently reviewed on a periodic basis. The independent review function performs the following:

a. Reviews proposed changes to the facility as described in the safety analysis report (SAR). The Independent Safety Review Body (Plant Safety Review Committee (PSRC))/Independent Review Committee (Nuclear Safety Review Committee (NSRC)) also verifies that changes do not adversely affect safety and if a technical specification change or NRC review is required.

b. Reviews proposed tests and experiments not described in the SAR prior to implementation. Verifies the determination of whether changes to proposed tests and experiments not described in the SAR require a technical specification change or license amendment.

c. Reviews proposed technical specification changes and license amendments relating to nuclear safety prior to NRC submittal and implementation, except in those cases where the change is identical to a previously approved change.

d. Reviews violations, deviations, and reportable events that are required to be reported to the NRC in writing within 24 hours. This review includes the results of investigations and recommendations resulting from such investigations to prevent or reduce the probability of recurrence of the event.

~~Reviews violations, deviations, and events that are required to be reported to the NRC. This review includes the results of investigations and recommendations resulting from such investigations to prevent or reduce the probability of recurrence of the event.~~

e. Reviews any matter related to nuclear safety that is requested by the Vice President, Nuclear Operations, Plant Manager, or any PSRC/NSRC member.

f. Reviews corrective actions for significant conditions adverse to quality.

g. Reviews internal audit reports.

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h. Reviews the adequacy of the internal audit program every 24 months.

Plant Safety Review Committee

The PSRC functions as an independent review body. In discharging its review responsibilities, the PSRC keeps Safety considerations paramount when opposed to cost or schedule considerations. One or more organizational units may collectively perform this function.

1. PSRC reviews are supplemented as follows:

    a. A qualified person, independent of the preparer, reviews proposed changes in the procedures as described in the SAR prior to implementation of the change to determine if a technical specification change or NRC approval is required.

    b. Audits of selected changes in the procedures described in the SAR are performed to verify that procedure reviews and revision controls are effectively implemented.

    c. Competent individual(s) or group(s) other than those who performed the original design but who may be from the same organization verify that changes to the facility do not result in a loss of adequate design or safety margins.

2. The results of supplemented reviews of matters involving the safe operation of the facility are periodically independently reviewed by the PSRC. This review is intended to support management in identifying and resolving issues potentially affecting safe plant operation. This review supplements the existing corrective action programs and audits.

    a. The review is performed by a team consisting of personnel with experience and competence in the activities being reviewed, but independent from cost and schedule considerations and from the organizations responsible for those activities. The PSRC supervisor or chairman has a minimum six (6) years combined managerial and technical support experience. The members of the PSRC should have a minimum of five (5) years of experience in their own area of responsibility as applicable to the activities being reviewed (i.e., a minimum of five years of experience in one of the twelve areas listed below:

        (1) Nuclear power plant operations
        (2) Nuclear engineering
        (3) Chemistry and radiochemistry
        (4) Metallurgy
        (5) Nondestructive testing
        (6) Instrumentation and control
        (7) Radiological safety
        (8) Mechanical engineering
        (9) Electrical engineering
        (10) Administrative control and quality assurance practices
        (11) Training
        (12) Emergency plans and related procedures and equipment).

    b. The review is supplemented by outside consultants or organizations as necessary to ensure the team has the requisite expertise and competence.

c. Results of the review are documented and reported to responsible management, PSRC Chairman, and NSRC.

d. PSRC periodically consider issues they determine warrant special attention, such as deficient plant programs, declining performance trends, employee concerns, or other issues related to safe plant operations and determine what issues warrant the review.

e. PSRC determines the scheduling and scope of review and the composition of the team performing the review.

Nuclear Safety Review Committee

1. The NSRC is assigned independent review responsibilities.

2. The NSRC reports to Vice President Nuclear Operations.

3. The NSRC is composed of no less than 5 persons and no more than a minority of members are from the on-site operating organization.

   For example, at least 3 of the 5 members must be from off-site if there are 5 members on the committee. A minimum of the chairman or alternative chairman and 2 members must be present for all meetings.

4. During the period of initial operation, meetings are conducted no less frequently than once per calendar quarter. Afterwards meetings are conducted no less than twice a year.

5. Results of the meeting are documented and recorded.

6. Consultants and contractors are used for the review of complex problems beyond the expertise of the off site/on site independent review committee.

7. Persons on the NSRC are qualified as follows:

   a. Supervisor or Chairman of the NSRC

      - Education: baccalaureate in engineering or related science
      - Minimum experience: 6 years combined managerial and technical support

   b. NSRC members

      Education: Baccalaureate in engineering or related science for those Independent review personnel who are required to review problems in

      - nuclear power plant operations,
      - nuclear engineering
      - chemistry and radiochemistry,
      - metallurgy,
      - nondestructive testing,
      - instrumentation and control,
      - radiological safety,
      - mechanical engineering, and electrical engineering.

High school diploma for those independent review personnel who are required to review problems in administrative control and quality assurance practices, training, and emergency plans and related procedures and equipment.

Minimum experience: 5 years experience in their own area of responsibility (nuclear power plant operations, nuclear engineering, chemistry and radiochemistry, metallurgy, nondestructive testing, instrumentation and control, radiological safety, mechanical engineering, and electrical engineering, administrative control and quality assurance practices, training, and emergency plans and related procedures and equipment).

2.3 TECHNICAL REVIEW AND CONTROL

2.3.1 ACTIVITIES

Activities which affect nuclear safety shall be conducted as follows:

a. Procedures required by Technical Specification 6.8 and other procedures which affect plant nuclear safety, and changes thereto, shall be prepared, reviewed, and approved. Each such procedure or procedure change shall be reviewed by an individual/group other than the individual/group which prepared the procedure or procedure change, but who may be from the same organization as the individual/group who prepared the procedure or procedure change. Procedures other than administrative procedures will be approved as delineated in writing by the General Manager, Nuclear Plant Operations. The General Manager, Nuclear Plant Operations will approve administrative procedures, security implementing procedures, and emergency plan implementing procedures. Temporary approval to procedures which clearly do not change the intent of the approved procedures can be made by two members of the plant management staff, at least one of whom holds a Senior Reactor Operator's License. For changes to procedures which may involve a change in intent of the approved procedures, the person authorized above to approve the procedures shall approve the change.

b. Proposed changes or modifications to plant nuclear safety-related structures, systems, and components shall be reviewed as designated by the General Manager, Nuclear Plant Operations. Each such modification shall be designed as authorized by Engineering Services and shall be reviewed by an individual/group other than the individual/group which designed the modification, but who may be from the same organization as the individual/group which designed the modification. Implementation of modifications to plant nuclear safety-related structures, systems, and components shall require concurrence by the General Manager, Nuclear Plant Operations.

c. Proposed tests and experiments which affect nuclear plant safety and are not addressed in the Final Safety Analysis Report shall be reviewed by an individual/group other than the individual/group which proposed the test or experiment.

d. Events reportable pursuant to the Technical Specification 6.9 and violations of Technical Specifications shall be investigated and a report prepared which evaluates the event and which provides recommendations to prevent recurrence. Such report shall be approved by the General Manager, Nuclear Plant Operations and forwarded to the Chairman of the NSRC.

e. Individuals responsible for reviews performed in accordance with 2.3.1 a through d above shall be members of the plant staff that meet or exceed the qualification requirements of Section 4 of ANSI 18.1, 1971, as previously designated by the General Manager, Nuclear Plant Operations. Each such

review shall include a determination of whether or not additional, cross-disciplinary review is necessary. If deemed necessary, such review shall be performed by the review personnel of the appropriate discipline.

f. Each review will include a determination of whether or not prior NRC approval is required.

g. Procedures listed in Part V, Section 3.2 and Technical Specifications 6.8.1, and changes thereto, shall be reviewed prior to implementation as set forth in Part V, Sections 2.2 and 2.3 above.

2.3.2 RECORDS

Records of the above activities shall be provided to the General Manager, Nuclear Plant Operations, PSRC and/or NSRC as necessary for required reviews.

2.4 RECORD RETENTION

In addition to the applicable record retention requirements of Title 10, Code of Federal Regulations, the following records shall be retained for ~~at least the minimum period indicated~~the duration of the unit operating license.

~~2.4.1 RETENTION FOR FIVE YEARS~~

~~The following records shall be retained for at least five years:~~

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a. Records and drawing changes reflecting unit design modifications made to systems and equipment described in the UFSAR.
b. Records of new and irradiated fuel inventory, fuel transfers, and assembly burnup histories.
c. Records of radiation exposure for all individuals entering radiation control areas.
d. Records of gaseous and liquid radioactive material released to the environment.
e. Records of transient or operational cycles for those unit components identified in TS Table 5.7-1.
f. Records of reactor tests and experiments.
g. Records of training and qualification for current member of the unit staff.
h. Records of in-service inspections performed pursuant to the Technical Specifications and this Part V of the QAPD.
i. Records of Quality Assurance activities as specified in the NRC's approved SCE&G position on Regulatory Guide 1.28, Revision 3, August 1985.
j. Records of reviews performed for changes made to procedures or equipment or reviews of tests and experiments pursuant to 10 CFR 50.59.
k. Records of meetings of the PSRC and the NSRC.
l. Records of the service lives of all hydraulic and mechanical snubbers defined in TS 3.7.7 including the date at which the service life commences and associated installation and maintenance records.
m. Records of secondary water sampling and water quality.
n. Records of analysis required by the radiological environmental monitoring program.
o. Records and logs of unit operation covering time interval at each power level.
p. Records and logs of principal maintenance activities, inspections, repair, and replacement of principal items of equipment related to nuclear safety.
q. All Reportable Events submitted to the Commission.

r. Records of surveillance activities, inspections, and calibrations required by the Technical Specifications and Part V of the QAPD.
s. Records of changes made to the procedures required by TS 6.8.1
t. Records of radioactive shipments.
u. Records of sealed source and fission detector leak tests and results.
v. Records of annual physical inventory of all sealed source material of record.
w. Records of reviews performed for changes made to the Offsite Dose Calculation Manual and the Process Control Program.

~~a. Records and logs of unit operation covering time interval at each power level.~~
~~a. Records and logs of principal maintenance activities, inspections, repair, and replacement of principal items of equipment related to nuclear safety.~~
~~a. All Reportable Events submitted to the Commission.~~
~~a. Records of surveillance activities, inspections, and calibrations required by the Technical Specifications and Part V of the QAPD.~~
~~a. Records of changes made to the procedures required by TS 6.8.1 as listed in 2.1.6.b above.~~
~~a. Records of radioactive shipments.~~
~~a. Records of sealed source and fission detector leak tests and results.~~
~~a. Records of annual physical inventory of all sealed source material of record.~~

~~**2.4.2 RETENTION FOR THE DURATION OF THE UNIT OPERATING LICENSE**~~

~~**The following records shall be retained for the duration of the unit operating license:**~~

~~**a. Records and drawing changes reflecting unit design modifications made to systems and equipment described in the UFSAR.**~~
~~**b. Records of new and irradiated fuel inventory, fuel transfers, and assembly burnup histories.**~~
~~**c. Records of radiation exposure for all individuals entering radiation control areas.**~~
~~**d. Records of gaseous and liquid radioactive material released to the environment.**~~
~~**e. Records of transient or operational cycles for those unit components identified in TS Table 5.7-1.**~~
~~**f. Records of reactor tests and experiments.**~~
~~**g. Records of training and qualification for current member of the unit staff.**~~
~~**h. Records of in-service inspections performed pursuant to the Technical Specifications and this Part V of the QAPD.**~~
~~**i. Records of Quality Assurance activities as specified in the NRC's approved SCE&G position on Regulatory Guide 1.28,** Revision 3, August 1985.~~
~~**j. Records of reviews performed for changes made to procedures or equipment or reviews of tests and experiments pursuant** to 10 CFR 50.59.~~
~~**k. Records of meetings of the PSRC and the NSRC.**~~
~~**l. Records of the service lives of all hydraulic and mechanical snubbers defined in TS 3.7.7 including the date at which** the service life commences and associated installation and maintenance records.~~
~~**m. Records of secondary water sampling and water quality.**~~
~~**n. Records of analysis required by the radiological environmental monitoring program.**~~
~~**o. Records of reviews performed for changes made to the Offsite Dose Calculation Manual and the Process Control Pr**ogram.~~

~~p.~~

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Section 3 Operational Procedures~~Section 3 Operational Procedures~~

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The following is a description of the various types of procedures used by SCE&G to govern the design, operation, and maintenance of its nuclear generating plants. SCE&G follows the guidance of Appendix A to Regulatory Guide 1.33 in identifying the types of activities that should have procedures or instructions to control the activity. Each procedure shall be sufficiently detailed for a qualified individual to perform the required function without direct supervision, but need not provide a complete description of the system or plant process.

3.1 Format and Content

The SCE&G procedure format and content include the following elements as appropriate to the purpose or task to be described:

- **Title/Status**
  Each procedure is given a title descriptive of the work or subject it addresses, and includes a revision number and/or date and an approval status.

- **Purpose/Statement of Applicability/Scope**
  The purpose for which the procedure is intended is clearly stated (if not clear from the title). The systems, structures, components, processes or conditions to which the procedure applies are also clearly described.

- **References**
  Applicable references, including reference to appropriate Technical Specifications, are required. References are included within the body of the procedure when the sequence of steps requires other tasks to be performed (according to the reference) prior to or concurrent with a particular step.

- **Prerequisites/Initial Conditions**
  Prerequisites/initial conditions identify those independent actions or procedures that must be accomplished and plant conditions which must exist prior to performing the procedure. A prerequisite applicable to only a specific portion of a procedure is so identified.

- **Precautions**
  Precautions alert the user to those important measures to be used to protect equipment and personnel, including the public, or to avoid an abnormal or emergency situation during performance of the procedure. Cautionary notes applicable to specific steps are included in the main body of the procedure and are identified as such.

- **Limitations and actions**
  Limitations on the parameters being controlled and appropriate corrective measures to return the parameter to the normal control band are specified.

- **Main body**

The main body of the procedure contains the step-by-step instructions in the degree of detail necessary for performing the required function or task.

- **Acceptance criteria**
  The acceptance criteria provide the quantitative or qualitative criteria against which the success or failure (as of a test-type activity) of the step or action would be judged.

- **Checklists**
  Complex procedures utilize checklists which may be included as part of the procedure or appended to it.

3.2 Procedure Types

Administrative Control Procedures

The administrative control procedures and directives provide a clear understanding of operating philosophy and management policies to ensure safe operation of the plant within the limits set by the operating license and Technical Specifications. They provide that plant activities are conducted in a manner that will protect the general public, plant personnel, and equipment. A description of these procedure categories is as follows:

- **Plant Organization and Responsibility Procedures**

  These procedures describe the plant organization and give the responsibility of the individuals by position and authority to operate the plant in a safe and efficient manner.

- **Development, Review, Approval, and Control of Safety-Related Plant Procedures**

  These procedures describe the method by which plant procedures are written, the control process for review and approval, and the system utilized to revise the procedures where needed. Administrative procedures, security plan implementing procedures, and emergency plan implementing procedures receive final approval by the General Manager, Nuclear Plant Operations or his/her designated alternate. They are reviewed under the direction of a supervisor from a group other than the originating group before final approval.

- **Conduct of Plant Operations Procedures**

  These procedures describe the rules and instructions issued by the General Manager, Nuclear Plant Operations pertaining to personnel conduct and control. These rules and instructions provide a clear understanding of operating philosophy and management policies. They delineate the authority and responsibility of the Reactor Operators and Senior Reactor Operators for the safe operation of the reactor. They establish the rules for procedure use and the designation of the persons responsible to authorize a temporary change to an approved procedure. Additional procedures establish standard operating orders which deal with such matters as job turnover and relief, designation of the confines of the Control Room including a diagram of the Control Room that indicates the area designated as at the controls, transmittal of operating data, limitations on access to equipment, and other such matters. Provisions are made for periodic review and updating of standing orders. Instructions which have short time applicability such as housekeeping, publications and their distribution, and personnel actions are

issued as special orders.

These procedures define the procedural steps for relief of shift personnel. Checklists are provided for the oncoming and off-going Control Room Supervisor and the oncoming Shift Supervisor to complete and sign. These checklists provide assurance that actual plant parameters are within allowable limits and that required systems are available and are in proper alignment for the prevention and mitigation of operational transients. Systems and components that are in a degraded mode of operation permitted by Technical Specifications shall be listed and time in degraded mode is compared with Technical Specification action statements. Auxiliary Operator checklists include any equipment under maintenance or test that could degrade a system or initiate an operational transient and shall include criteria for acceptable status. The Operations Supervisor will make unannounced audits of shift relief to evaluate the effectiveness of shift relief and turnover.

Also these procedures establish the authority and responsibility of the person in charge of the Control Room to limit access.

Conduct of Plant Operations administrative procedures establish actual work time limitations for plant shift personnel who maintain or operate any structures, systems, or components important to safety.

- **Shift Supervisor's Responsibility**

Upper level management shall issue a directive that establishes the management responsibility for the Shift Supervisor under all plant conditions. It shall contain clear delineation of management chain of authority as to who can, and when the Shift Supervisor is relieved of the responsibility for direct control of the plant.

An administrative procedure is provided that gives the authority and responsibilities of the Shift Supervisor, Control Room Supervisor, Control Room Operator, and other shift personnel.

Both on the job training and classes emphasize responsibility for safe operation and management functions as given in the administrative procedure.

A review of administrative duties of the Shift Supervisor has been conducted by senior plant and corporate management. Additional administrative personnel have been added to the operating group that relieves the Shift Supervisor of routine duties that distract from the management responsibility for assuring the safe operation of the plant.

- **Control of Plant Documents Procedures**

These procedures describe the preparation and retention of plant records. Retention periods are established to assure the ability to reconstruct significant events and satisfy statutory requirements.

- **Corrective Action Reporting Procedures**

These procedures assure that conditions adverse to plant safety such as equipment and material malfunction, abnormal occurrences, and nonconformances are promptly identified and corrected. They ensure that the cause of the conditions is determined and reported to the appropriate level of management for corrective action.

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- **Equipment Control Procedures**

  These procedures describe the control measures and actions such as locking, tagging, notification, removal of tags, and identification of equipment. They provide for control of equipment to maintain reactor and personnel safety and to avoid unauthorized operation of equipment. They provide instructions for verifying correct performance of operating activities.

- **Design Modification Control Procedures**

  These procedures ensure that plant modifications satisfy, at a minimum, the same design requirements as the original equipment.

Procurement and Materials Control Procedures

These procedures provide for the control of purchased material, equipment, and services. They provide for proper identification, quality level requirements, control, handling, storage, and shipping of materials, parts, and components. These procedures also provide for the proper documentation to ensure quality of safety-related systems, equipment, and structures after maintenance or repair.

- **Control and Calibration of Test Equipment and Instrumentation Procedures**

  These procedures ensure that testing and measuring devices are of the proper range and type and are controlled, calibrated, adjusted, and maintained at specified intervals or prior to use to assure the necessary accuracy of calibrated devices. Records are made and equipment suitably marked to indicate calibration status.

- **Control of Special Processes During Operations Procedures**

  These procedures assure that special processes are accomplished under controlled conditions in accordance with applicable codes, standards, specifications, criteria, and other special requirements using qualified personnel and procedures.

- **Non-Conformance Control/Deficiency Reporting Procedures**

  These procedures provide for control of items, services, or activities which do not conform to requirements. These procedures include instructions for identification, documentation, segregation, notification of affected organizations, and method of disposition of such items, services, or activities.

- **Test Control Procedures**

  These procedures assure that testing required to demonstrate that an item will perform satisfactorily in service is accomplished properly. Test procedures incorporate or reference the requirements and acceptance limits contained in applicable design documents. These test procedures may include preoperational tests, initial operational phase tests, surveillance tests, and tests during design, fabrication, and construction activities associated with plant maintenance and modification.

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- **Feedback of Operating Experience**

  These procedures establish a program for evaluating operating plant experience and providing the results of the evaluations, as necessary, to pertinent plant personnel. The services of "Industry Groups" such as INPO will be utilized to the extent possible in the performance of this function.

Control Room Operating Procedures

Control Room operating procedures are those procedures that are performed by the licensed Control Room Operator or under his/her direction and control. They are a preplanned method for the conduct of operations to minimize reliance on memory. These procedures include anticipated operating conditions, the normal method of control, means for and limits on operation of the plant, or plant systems that affect the safety of the plant and the public.

- **General Operating Procedures**

  General Operating Procedures (GOP) provide for the integrated operation of the plant. These procedures provide the sequence of plant operations to take the plant from a given initial condition to a final expected condition. Associated system operating procedures are referenced as applicable. Necessary precautions are inserted at critical points.

- **Emergency Operating Procedures**

  Emergency Operating Procedures (EOP) are written so that a trained operator and crew will be able to identify an emergency from the symptoms available to them and take immediate action on the expected course of events to place the plant in a known safe condition and to mitigate the consequence of a serious condition should it occur. Since emergencies may not follow anticipated patterns these procedures provide sufficient flexibility to accommodate variations. Those sections of the procedure that require immediate response action from the operating crew are committed to memory. Considerable judgment on the part of competent personnel is exercised before departure from these procedures.

- **System Operating Procedures**

  System Operating Procedures (SOP) provide instructions for energizing, starting up, shutting down, changing modes of operation, and other instructions for operations of systems related to the safety of the plant.

  These procedures are concerned with systems only and include valve and switch lineups, control operations, and instrumentation within the system boundaries. They are subdivided into normal operations, infrequent operations, and off normal conditions in the main body.

- **Annunciator Response Procedures**

  Annunciator Response Procedures (ARPs) are written to instruct the operator on the proper action to be taken in response to annunciators on the Main Control Board. They contain annunciator identification, inputs into the annunciator, and logical operator responses to be taken to ensure proper corrective action. The ARPs are identified by panel number. An illustration in the beginning of the ARP depicts the annunciator panel. In the case of computer alarms each alarm's unique identifier is listed.

When use of the ARP is required, the operator selects the proper tab by an alarm panel number.

- **Fuel Handling Procedures**

  Fuel Handling Procedures (FHP) are written to specify actions and philosophy for core alterations and partial or complete refueling operations. They include requirements for continuous monitoring of neutron flux throughout core loading and audible annunciation of abnormal flux increases. The duties of personnel assigned to refueling, such as periodic data taking, response actions to alarms during refueling, and criteria for stopping the refueling are specified. Also, instructions for proper sequence of events, verification, and frequency of sampling to ensure shutdown margin, communications between the control room and the fuel loading station, documentation of final fuel component serial numbers and location, containment integrity requirements, and rules for periods when refueling is interrupted are included. System operating procedures are referenced as required.

- **Special Procedures**

  Special procedures are written and issued to direct operations during testing, refueling, maintenance, and modifications. These procedures provide guidance in unusual situations not covered by existing procedures. They ensure orderly and uniform operations for short periods when the plant, a system, or a component is not performing in a normal manner and an existing procedure does not apply. Special procedures designate the period of time during which they may be used and are subject to the same review and approval process as other operating procedures.

Maintenance and Modification Procedures

Maintenance and modification procedures define the policies and practices by which structures, systems, and components are kept in a condition of good repair so that they are capable of reliably performing their intended functions. This includes those activities performed by maintenance or contractor personnel to maintain, repair, or modify safety-related equipment. Additional related activities covered are those by operating personnel to ensure that a planned maintenance activity can be safely accomplished, that proper plant operating conditions exist, to authorize the release of equipment to be maintained using equipment control procedures, and to assure that the equipment has been returned to normal operating status at the completion of maintenance work, as well as verification of functional acceptability. Procedures are written to assure measurement accuracies are adequate to keep safety parameters and controls within safety and operational limits. This instrumentation includes interlocks, alarm devices, sensors, readout instruments, transmitters, signal conditioners, laboratory equipment, key recorders, and protective logic circuits. Calibration, testing, and checking of instrumentation channels are performed at the frequency specified in Technical Specifications.

Emergency Plan Procedures

These procedures are written in sufficient detail that a qualified individual can perform the required actions without supervision. They provide a step by step order and logical sequence in a concise manner but are flexible enough to give latitude to the user for the exercise of judgment in implementing specific actions or parts of the procedure. These instructions specify the individual or organization having authority and responsibility for performing critical tasks. The actions to be performed by support agencies and the coordination with other elements of the emergency organization are also specified. Guidelines for initiating

recovery after the emergency is over to restore the plant to the pre-emergency conditions are given.

Chemical Radiochemical Control Procedures

These procedures provide instructions for maintaining reactor coolant, condensate, and feedwater within prescribed quality limits and include the nature and frequency of sampling and analysis. They also include laboratory instructions and instructions for calibration of laboratory equipment. Limitations on concentrations of agents that could cause corrosive attack, foul heat transfer surfaces, or become sources of radiation hazards due to activation are given.

Plant Radiation Protection Procedures

These procedures cover plant personnel, other personnel temporarily assigned, contractor and vendor personnel, and visitor protection to maintain occupational dose rate to as low as reasonably achievable. They provide coverage for all normal operations and anticipated operational occurrences. This includes refueling, purging, fuel handling and storage, also radioactive material handling, processing, use, and storage. Other areas covered are maintenance, routine operational surveillance, inservice inspection, and calibration.

Plant Security Procedures

These procedures are written to supplement physical barriers and features designed to control access to the plant and as appropriate to sensitive areas and equipment within the plant. Information concerning design features and administrative provisions is protected and distribution is limited.

Surveillance Test Procedures

These tests and inspections are performed in accordance with the Technical Specifications to ensure that the required reliability of safety systems is maintained. These surveillance test procedures contain a description of the test objectives, the acceptance criteria used to evaluate the test results, and the prerequisites for performing the test. They include any special conditions to be used to simulate normal or abnormal operating conditions, limiting conditions, the test procedure, and any special test equipment or calibrations required to conduct the test. A master surveillance schedule, reflecting the status of surveillance testing is also maintained. Additional control procedures ensure timely conduct of surveillance testing, appropriate documentation, reporting, and evaluation of test results. Significant deficiencies identified by the tests are reported to management. The deficiencies will be evaluated and the condition corrected in a timely manner.

Test and Inspection Procedures

These documents provide the necessary measures to assure quality is achieved and maintained for the nuclear facilities. The instructions for tests and inspections may be included within other procedures, such as installation and maintenance procedures, but will contain the objectives, acceptance criteria, prerequisites for performing the test or inspection, limiting conditions, and appropriate instructions for performing the test or inspection, as applicable. These procedures also specify any special equipment or calibrations required to conduct the test or inspection and provide for as appropriate documentation and evaluation by responsible authority to assure test or inspection requirements have been satisfied. Where necessary, hold or witness points are identified within the procedures and require appropriate approval for the work to continue beyond the designated point. These procedures provide for recording the date, identification of those

performing the test or inspection, as-found condition, corrective actions performed (if any), and as-left condition, as appropriate, for the subject test or inspection.

Fire Protection Procedures

These associated procedures provide the necessary planning and instructions to ensure adequate fire protection. Included, but not limited to, are the provisions made in the Fire Protection Evaluation Report (FPER). The responsibilities for preparation of schedules and procedures required by the Operations, Maintenance, and Technical Groups are stated in this report and are detailed in administrative procedures.

Section 4 Control of Systems and Equipment During Plant Operation

Permission to release systems and equipment for maintenance or modification is controlled by designated operating personnel and documented. Measures, such as installation of tags or locks and releasing stored energy, are used to ensure personnel and equipment safety. When entry into a closed system is required, SCE&G has established control measures to prevent entry of extraneous material and to assure that foreign material is removed before the system is reclosed.

Administrative procedures require the designated operating personnel to verify that the system or equipment can be released and determine the length of time it may be out of service. In making this determination, attention is given to the potentially degraded degree of protection where one subsystem of a redundant safety system is not available for service. Conditions to be considered in preparing equipment for maintenance include, for example: shutdown margin; method of emergency core cooling; establishment of a path for decay heat removal; temperature and pressure of the system; valves between work and hazardous material; venting, draining and flushing; entry into closed vessels; hazardous atmospheres; handling hazardous materials; and electrical hazards.

When systems or equipment are ready to be returned to service, designated operating personnel control placing the items in service and document its functional acceptability. Attention is given to restoration of normal conditions, such as removal of jumpers or signals used in maintenance or testing, or actions such as returning valves, breakers or switches to proper start-up or operating positions from "test" or "manual" positions. Where necessary, the equipment placed into service receives additional surveillance during the run-in period.

Independent verifications, where appropriate, are used to ensure that the necessary measures have been implemented correctly. The minimum requirements and standards for using independent verification are established in company documents.

SECTION 5 Plant Maintenance

SCE&G establishes controls for the maintenance or modification of items and equipment subject to this QAPD to ensure quality at least equivalent to that specified in original design bases and requirements, such that safety-related structures, systems and components are maintained in a manner that assures their ability to perform their intended safety function(s). Maintenance activities (both corrective and preventive) are scheduled and planned so as not to unnecessarily compromise the safety of the plant.

In establishing controls for plant maintenance, SCE&G commits to compliance with NQA-1-1994, Subpart 2.18, with the following clarifications:

- Where Subpart 2.18 refers to the requirements of ANS-3.2, it shall be interpreted to mean the applicable standards and requirements established within the QAPD

- Section 2.3 requires cleanliness during maintenance to be in accordance with Subpart 2.1. The commitment to Subpart 2.1 is described in the QAPD, Part II, Section 13.2.