

4.0 LICENSEE ORGANIZATION AND CONDUCT OF OPERATIONS

4.1 CORPORATE ORGANIZATION

This section provides information relative to the corporate organization, its functions and responsibilities, and the qualification of personnel participating in the facility design, design review, design approval, testing, maintenance, operation, modification and decommissioning.

4.1.1 CORPORATE ORGANIZATION FUNCTIONS, RESPONSIBILITIES, AND AUTHORITIES

The Southern California Edison Company (SCE) provides electric service to Southern California and operates San Onofre. The company has extensive experience in the design, construction, startup testing, operation, and staffing of modern generating facilities.

The corporate organization, which provides line responsibility for company operation, is shown in Figures 4-1 and 4-2. The ultimate responsibility for operating, maintaining, repairing, inspecting, testing, refueling, modifying, and decommissioning SONGS 1 rests with the Chief Executive Officer. He assigns responsibilities to various SCE organizations involved in Nuclear Generating Station Operations.

The Senior Vice President (SVP) & Chief Nuclear Officer, who reports to the Chief Executive Officer (SCE), is responsible for the Station Manager, the Nuclear Regulatory Affairs Division, the Nuclear Oversight Division, the Engineering & Technical Services Division, Communication Support, Business/Strategic Planning, Site Recovery, Performance Improvement, and Site Support.

4.1.2 CORPORATE MANAGEMENT AND TECHNICAL SUPPORT

4.1.2.1 Engineering & Technical Services

The VP of Engineering and Technical Services has responsibility for Nuclear Fuel Management, Design Engineering, Maintenance/System Engineering, Site Support, Project Management Organization as shown in Figure 4-3. These groups provide engineering change package preparation and engineering analysis. The engineering staff requests and coordinates support from other departments in the company, or from outside consultants and engineering firms, as needed. The Unit 1 Decommissioning Organization reports to the Manager of Projects, who in turn reports to the Director, Project Management Organization.

4.1.2.2 Plant Manager

The Plant Manager has ultimate responsibility for the safe operation of the San Onofre Nuclear units. As shown in Figure 4-3, this individual is responsible for: Operations, Maintenance, Health Physics, Nuclear Training, Chemistry, Work Control, and Occupational Health and Safety.

4.1.2.3 Nuclear Oversight Division, and Nuclear Regulatory Affairs

These groups provide quality assurance and licensing services/submittals. All SONGS 1 licensing issues are addressed by the Director of Nuclear Regulatory Affairs.

The Nuclear Oversight Division is responsible for the establishment and execution of the SCE Quality Assurance Program in compliance with 10CFR50, Appendix B, and other appropriate regulations and standards. The Director of Nuclear Oversight is responsible for establishing quality assurance policies, goals, and objectives and ensuring that these policies are followed and that the goals and objectives are achieved. The quality assurance organization is described in the SCE QA Topical Report.

4.1.2.4 Qualification of Engineering/Technical Services Staff

Members of the Engineering/Technical Services staff available for the technical support of SONGS have the education, experience, and skills, commensurate with their level of responsibility. The qualifications provide reasonable assurance that decisions and actions during the decommissioning of SONGS 1 will not constitute a hazard to the health and safety of the public.

The education and experience of the Engineering/Technical Services staff meet or exceed the requirements for technical support personnel as stated in ANSI N18.1-1971 and Regulatory Guide 1.8, Revision 1. Definition of personnel performing technical support functions is provided in applicable station procedures.

4.1.2.5 Consultants, Contractors, and Suppliers

Consultants and specialty contractors will be utilized as necessary. Consultant/contractor personnel will report to utility staff responsible for management and oversight of decommissioning activities.

Various other contractors, suppliers, and consultants are utilized as required to provide specialized support and services.

4.2 PLANT ORGANIZATION

4.2.1 SONGS 1 DECOMMISSIONING PROJECT

The Project Manager, SONGS 1 Decommissioning reports to the Manager, Projects and is responsible for the decommissioning of SONGS 1. He is responsible for overall strategy and long-term business planning of decommissioning activities, establishing and ensuring achievement of objectives and initiatives associated with decommissioning activities of SONGS 1, and, safely and efficiently decommissioning SONGS 1 in accordance with applicable regulations and project cost and schedule. The Project Manager is responsible for directing and overseeing staff in accomplishing the physical activities to prepare the plant for decommissioning, and in performing dismantlement, disassembly, removal, decontamination and packaging of structures, systems and components that constitute decommissioning. The Project Manager procures and manages contractors, provides field oversight, secures and coordinates Health Physics and Low Level Radwaste (LLRW) support. The Decommissioning Project organization plans, prepares, and performs the safe and prudent decommissioning of SONGS 1 in accordance with all requirements while not adversely affecting the operation of SONGS 2 and 3. The organization is shown on Figure 4-3. The project is supported by Engineering/Technical Services and other SONGS organizations.

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4.2.1.3 Health Physics/Low Level Radwaste Supervisor

The Health Physics/Low Level Radwaste Supervisor is matrixed from Health Physics and reports directly to the Project Manager, SONGS 1 Decommissioning. He is responsible for managing the radiological work planning and production based on the project schedule. He maintains a staff necessary for regulatory compliance, and the safe and cost effective collection, sorting, packaging, shipping and disposal of LLRW resulting from the decommissioning of SONGS 1 for the duration of the project.

4.2.1.4 Project Cost and Schedule Manager

The Project Cost and Schedule Manager reports directly to the Director, Project Management Organization. He is responsible for implementing and managing the budget, cost accounting, cost controls, planning, and scheduling activities for the SONGS 1 Decommissioning Project.

4.2.1.5 External Affairs Project Manager

The External Affairs Project Manager is matrixed from Business Planning and Financial Services and reports directly to the Project Manager, SONGS 1 Decommissioning. He is responsible for:

- Coordinating all regulatory proceedings required by the California Public Utilities Commission for the decommissioning project;
- Ensuring the decommissioning project obtains and meets the conditions of all permits and/or easement lease contracts required by state regulatory agencies.

4.2.1.6 Construction Supervisor

The Construction Supervisor is matrixed from Project Management Organization, Construction Services and reports directly to the Project Manager, SONGS 1 Decommissioning. He is responsible for overall management oversight of SONGS 1 field activities. The Construction Supervisor is generally responsible for maintaining SONGS 1 housekeeping.

4.2.1.7 Supervisor, Unit 1 Decommissioning Engineering Support

The Supervisor, Unit 1 Decommissioning Engineering Support is matrixed from Design Engineering and reports directly to the Project Manager, SONGS 1 Decommissioning. He is responsible for coordinating all engineering work associated with SONGS 1.

4.2.2 (DELETED)

4.2.3 EQUIPMENT MAINTENANCE SUPERVISION

The Director, Maintenance reports to the Plant Manager and is responsible for all mechanical, instrumentation and controls, and electrical maintenance.

The maintenance force consists of personnel experienced with mechanical, instrumentation and controls, and electrical maintenance of large steam electrical generating plants, nuclear and/or fossil. Major maintenance is handled by the station maintenance force, and various in-house and contract service organizations as circumstances dictate.

The Director, Maintenance cooperates closely with the Director, Operations, and other staff managers and supervisors in scheduling work.

4.2.4 HEALTH PHYSICS SUPERVISION

The Manager, Health Physics, reports to the Plant Manager and is responsible for the station radiation protection program. He is responsible for providing station health physics support to operational, maintenance, and decommissioning activities. In addition, the Manager, Health Physics, is responsible for the shipment and disposal of radioactive waste, personnel radiation monitoring measurements, a comprehensive respiratory protection program, a self-assessment and corrective action program, and an ALARA program. The HPM ensures that adequate protective clothing is available at all times. The Manager, Health Physics, is responsible for properly maintaining all required radiation exposure records for station personnel and visitors. The Manager, Health Physics, will distribute the function of the Health Physics Program among the Health Physics Management Team.

The HP Supervisor, Unit 1 Decommissioning, reports to the HPM and is responsible for providing radiological protection services to the Unit 1 Decommissioning project including operational health physics, personnel dosimetry, respiratory protection, instrumentation, technical/professional support, determining the feasibility of unrestricted release of structures and components, radwaste disposal, and environmental effluent controls.

The Supervisor, HP Operational Support reports to the HP Manager and is responsible for ensuring adequate health physics support is provided to operations and maintenance personnel during normal operations and emergency conditions, and for controlling access to Units 2 and 3 radiologically controlled areas. The HP Operational Support supervisor is also responsible for ensuring that all personnel radiation doses are properly measured, recorded in individual exposure histories, and that resultant records are properly maintained as required by regulation. In addition, the supervisor is responsible for operation of a comprehensive respiratory protection program.

The Supervisor of Radioactive Materials Control (RMC) reports to the HPM, and is responsible for ensuring radioactive waste shipments meet all applicable transportation and packaging requirements. In addition, the Supervisor is responsible for ensuring waste is properly disposed by transferring the waste to authorized facilities. The Supervisor of RMC is also responsible for the receipt and storage of radioactive materials shipments.

The Health Physics Technical Support Supervisor reports to the HPM and is responsible for providing technical support for all aspects of the Health Physics program. The Supervisor/staff are responsible for interpreting and applying regulations across the HP program, for developing and controlling program procedures, and for coordinating software development and maintenance with the Information Systems organization.

The Supervisor, HP Instrumentation reports to the HP Manager and is responsible to provide, calibrate, and maintain all portable and fixed radiation instrumentation required by the HP program. The Supervisor is also responsible for the control, inventory and periodic leak testing of all radioactive sources used on site for the calibration of HP and plant equipment.

The Supervisor, Self-Assessment reports to the HP Manager and is responsible for the self-assessment program and for associated corrective actions.

The ALARA Supervisor reports to the HP Manager and is responsible for the site-wide ALARA program. The Supervisor assists in the development and tracking of exposure goals. The Supervisor performs regular reviews and provides regular status reports of project and personnel exposures. Some aspects of the ALARA program are delegated to an ALARA Engineer assigned to Unit 1.

4.2.5 QUALITY ASSURANCE AND QUALITY CONTROL SUPERVISION

The Plant Manager has ultimate responsibility for the safe and reliable operation, maintenance, and testing of SONGS. He is responsible for the management of station activities in conformance with the Quality Assurance program.

Verification of station activities as being performed in conformance with the Quality Assurance program is accomplished by inspection, audit and surveillance by the Nuclear Oversight Division. Quality assurance and quality control personnel are located at the station and report to the Director of Nuclear Oversight.

The Director of Nuclear Oversight reports to the SVP & Chief Nuclear Officer, and is responsible for the development, maintenance, and surveillance of the Quality Assurance Program. The Director of Nuclear Oversight is responsible for surveillance of safety-related activities and has the authority to stop work.

The Project Oversight Manager is responsible for the quality assurance, quality control, and self-assessment of the Decommissioning Project and Dry Fuel Storage.

4.3 QUALIFICATION OF NUCLEAR PLANT PERSONNEL

The recommendations of ANSI N18.1-1971, Standard for Selection and Training of Personnel for Nuclear Power Plants, for comparable positions, except for the manager, Health Physics, are currently used as the basis for establishing minimum qualifications for all management, supervisory, and professional-technical personnel in the plant organization.

The education, training, and experience requirements for operators, technicians, and repairmen meet the qualifications for these positions stated in ANSI N18.1-1971. Established company training and apprenticeship programs include documented academic and on-the-job training, as well as comprehensive qualification examinations. The length of these programs varies from a minimum of 24 months to a maximum of 48 months, with most requiring 30 months. Technicians without prior experience receive academic training from the SCE training department for a period of about 2 years before being considered fully qualified for this position.

The key management supervisory and technical positions in the plant organizations are filled by persons who have been actively engaged in the nuclear power field.

4.4 TRAINING PROGRAM

SCE maintains training programs during the decommissioning period that comply with the PDTs. The training programs, in concert with other managerial systems, ensure that qualified individuals are available to support decommissioning activities and protect the health and safety of plant personnel and the public.

SONGS 1 is maintained by a common SONGS 1, 2 and 3 work force, during the decommissioning period. The existing training programs will remain in effect and be utilized to the appropriate degree for personnel requiring access to or involved in maintaining SONGS 1. The following are examples of existing training programs:

- General Employee Training (GET)
- Radiation Protection Training
- Chemistry Technician Training
- Operator Training
- Maintenance Training
- Emergency Plan Training
- Security Training
- Quality Assurance Training
- Dosimetry and ALARA Training
- Safety Training

4.4.1 SCOPE OF TRAINING

The training given to site personnel provides individuals with the necessary knowledge and skills to perform their job functions. SCE will continue to provide specialized training applicable to specific activities, tasks, and conditions, as needed.

4.4.1.1 General Employee Training

SCE maintains the general employee training and access requirements for SONGS 1 employees and contractor/visitors. Access for radiation and non-radiation workers is controlled during the Decommissioning period. SONGS 1 has been separated from the Units 2/3 Protected Area and some of the physical security requirements have been relaxed.

4.4.1.2 Radiation Protection/Chemistry Technician Training

The Health Physics and Chemistry training programs meet or exceed the existing requirements at SONGS 1 and are not affected by the shutdown of the unit.

4.4.1.3 Operator Training

The current certification program for operators is conducted in accordance with the administrative controls established by the SONGS Nuclear Training Division (NTD). SCE is a member of the National Academy for Nuclear Training and is accredited by the Institute of Nuclear Power Operations (INPO). The certification program for Unit 1 is no longer conducted. The accredited program was approved by the academy as indicated in reference 2. SCE maintains accreditation by repeating the accreditation process every 4 years.

4.4.1.4 (Deleted)

4.4.1.5 (Deleted)

4.4.1.6 Maintenance Training

SCE uses a Maintenance work force that is common to all three units. Maintenance training programs have not been changed or affected by the Decommissioning of SONGS 1.

4.4.1.7 Trainer Qualifications

SONGS procedures establish managerial controls to ensure training activities comply with the requirements of the SONGS 1 Operating (Possession Only) License, PDTS and applicable regulations. SCE reviews instructor qualifications to ensure trainers possess the knowledge, experience, and abilities to provide the required training.

4.4.1.8 Training Records

SCE documents and maintains records of required training in accordance with appropriate procedures.

4.5 REVIEW AND AUDIT

Operations affecting nuclear safety are independently reviewed and audited by company organizations other than those directly responsible for the activity. The review and audit program ensures that proper review and evaluation is conducted for proposed facility and procedure changes, tests, experiments, and unplanned events. This program complies with the associated requirements in 10CFR50 paragraph 50.59 and is conducted in accordance with the recommendations of Regulatory Guide 1.33, Quality Assurance Program Requirements (Operation), and ANSI Standard N18.7-1976, Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants.

The Plant Manager has ultimate onsite responsibility for the safety of SONGS and is kept abreast of plant operating conditions by onsite managers and supervisors who are knowledgeable and experienced in their areas of job responsibility. Figure 4-4 illustrates the relationship between SCE's independent review organizations.

4.5.1 ONSITE REVIEW

The Onsite Review Committee has overall responsibility for the review of nuclear safety aspects of station administration, maintenance, and operational activities. The methods used to exercise this responsibility will ensure that before they are approved, items of this nature are reviewed for adequacy by qualified personnel at the appropriate technical and managerial level(s). Control over proper implementation will be maintained under the authority of the committee in a manner consistent with SCE corporate policy, approved procedures, and regulatory and licensing requirements. A detailed description of the Onsite Review Committee and its responsibilities and authority is provided in QA Topical Report Section 17.2.20.2, "Onsite Review Committee (OSRC)."

4.5.2 NUCLEAR OVERSIGHT BOARD

The Nuclear Oversight Board provides offsite independent review of operating activities and is described in detail in QA Topical Report Section 17.2.20.4, "Nuclear Oversight Board." The Nuclear Oversight Board is an offsite organization composed of no less than five persons who are independent review specialists and collectively have the experience and competence required to perform technical review. The Nuclear Oversight Board maintains written records of its reviews and recommendations.

4.5.3 AUDIT PROGRAM

A comprehensive system of planned and documented audits is carried out to verify compliance with all aspects of administrative controls and the quality assurance program.

The quality assurance organization performs audits as outlined in QA Topical Report Section 17.2.18, "Audits," under the cognizance of the Director of Nuclear Oversight and Assessment. These audits are performed with a frequency commensurate with their safety significance and encompass:

- (1) Conformance of facility operation to applicable license conditions and technical specifications,

- (2) Training and qualifications of the operating staff,
- (3) Corrective actions at 6-month intervals to correct deficient items affecting nuclear safety,
- (4) Quality assurance program,
- (5) Facility emergency plan,
- (6) Facility security plan,
- (7) Facility fire protection plan, and
- (8) Any area considered appropriate by the nuclear safety group or the nuclear control board.

The Nuclear Oversight Division is responsible for auditing any activity or documentation affecting the quality of a safety-related item. Audits are performed by quality assurance engineers or other qualified persons designated by the Director of Nuclear Oversight. These audits are performed at the general office, the station, Westminster, or the contractor's, vendor's, or consultant's source locations as required. The quality assurance audit program for operations is described in the SCE topical report SCE-1-A.

4.6 PLANT PROCEDURES

This section describes administrative and operating procedures used by the operating organization to ensure that routine operating, off-normal, and emergency activities are conducted in a safe manner. All safety-related operations are conducted in accordance with detailed written and approved procedures as described in PDTS 6.8.

4.6.1 ADMINISTRATIVE PROCEDURES

4.6.1.1 Conformance with Regulatory Guide 1.33

The administrative procedures for SONGS 1 are consistent with the recommendations of Regulatory Guide 1.33, Revision 2.

4.6.1.2 Preparation of Procedures

Cognizant station managers are responsible for initiating, preparing, and controlling plant procedures consistent with their responsibilities and ensuring that work is performed in accordance with the latest applicable documents.

Administrative procedures governing the conduct of operations are written to be applicable to SONGS 1 as well as SONGS 2 and 3, to the maximum extent possible.

4.6.1.3 Procedures

Administrative procedures prepared for SONGS 1 include special procedures, equipment control procedures, and procedures for equipment maintenance and modification.

4.6.1.3.1 (Deleted)

4.6.1.3.2 Special Procedures

Special procedures are prepared to control processes performed only once or for a short period of time. They expire 12 months after they are approved.

4.6.1.3.3 Equipment Control Procedures

All remaining Unit 1 in-service equipment is administratively controlled from Units 2/3 using the Units 2/3 processes and procedures.

4.6.1.3.4 Control of Maintenance and Modifications

Maintenance of equipment important to safety is accomplished in accordance with written procedures. Safety-related/RO equipment is modified in accordance with written procedures.

4.6.1.3.5 Master Surveillance Testing Schedule

Surveillance testing procedures maintained under Decommissioning are in accordance with commitments contained in the Administrative Controls Document. These include:

- Radiological surveys,
- Calibration and control of measuring and test instrumentation.

4.6.1.3.6 Log Book Usage and Control

All Unit 1 Operations logs are maintained and controlled at Units 2/3 using the Units 2/3 processes and procedures.

4.6.2 OPERATING AND MAINTENANCE PROCEDURES

4.6.2.1 Operating Procedures

All remaining Unit 1 equipment and processes requiring operating procedures have been incorporated into Units 2/3 procedures and programs.

4.6.2.2 Other Procedures

Other procedures are provided for health physics, emergency, instrument calibration and test, chemical and radiochemical control, radioactive waste management, maintenance, material control, plant security, and fire protection.

4.6.2.2.1 Health Physics

Health physics procedures are designed to limit and control radiation exposures and the spread of contamination as well as to meet the requirements of 10CFR20 and ALARA philosophy.

Procedures in this area include:

- Control and use of radioactive material,
- Respiratory protection,
- ALARA,
- Personnel monitoring,
- Internal dosimetry and bioassay,
- Instrument calibration and control,
- Radiation, contamination, and airborne surveys, and
- Solid radwaste.

4.6.2.2.2 Emergency Preparedness

Emergency preparedness procedures are provided to implement the provisions of the emergency plan. They provide for the assignment of responsibilities, instructions to employees, procedures for coping with emergency, and mobilization of offsite assistance where necessary.

4.6.2.2.3 Instrument Calibration and Test

Instrument calibration and test procedures provide detailed step-by-step methods for calibration and test, acceptance criteria, and testing intervals performed by instrument technicians.

Procedures in this area include:

- Area radiation monitoring system calibration,
- Nuclear instrumentation system test and calibration,
- Process radiation monitoring system calibration, and
- Calibration of test instrumentation and devices.

4.6.2.2.4 Chemical-Radiochemical Control

Chemical-radiochemical control procedures provide the instructions to accomplish various chemical and radiochemical analyses and counting techniques. These procedures apply to work performed by nuclear chemistry technicians. Procedures in this area include:

- Boron analysis,
- Cesium analysis,
- Radioactive sample system operation,
- Chloride analysis,
- Fluoride analysis, and
- pH measurement.

4.6.2.2.5 Radioactive Waste Management

Radioactive waste management procedures are included in plant health physics procedures.

4.6.2.2.6 Maintenance

Maintenance procedures provide detailed instructions for important maintenance functions performed by maintenance and technical personnel. Procedures in this area include:

- (1) Maintenance station orders which present policies and responsibilities for maintenance programs,
- (2) Maintenance administrative procedures which describe implementing details for maintenance program policies,
- (3) Maintenance surveillance procedures which present performance details for inspections and tests assigned to the maintenance department,
- (4) (Deleted)
- (5) Preventive maintenance procedures which present performance details for routine electrical and mechanical scheduled activities required to maintain safety-related and certain nonsafety-related equipment, components, and structures operable at the quality level necessary for them to perform their intended functions, and
- (6) Corrective maintenance procedures which describe performance details for nonroutine electrical and mechanical equipment overhauls with replacements of life-limiting wear items. These may be scheduled based upon historical data, calendar time, operating hours, etc., or nonscheduled based upon failure or predicted failure.

4.6.2.2.7 Material Control

Material control procedures describe the methods used to control the status of purchased material and nonconforming material. These procedures include:

- Control of purchased material, equipment, and services,
- Handling, storage, and shipment of materials, and
- Nonconforming materials, parts, components, and operations.

4.6.2.2.8 Plant Security

Plant security procedures provide instructions for implementing the security plan.

4.6.2.2.9 Fire Protection

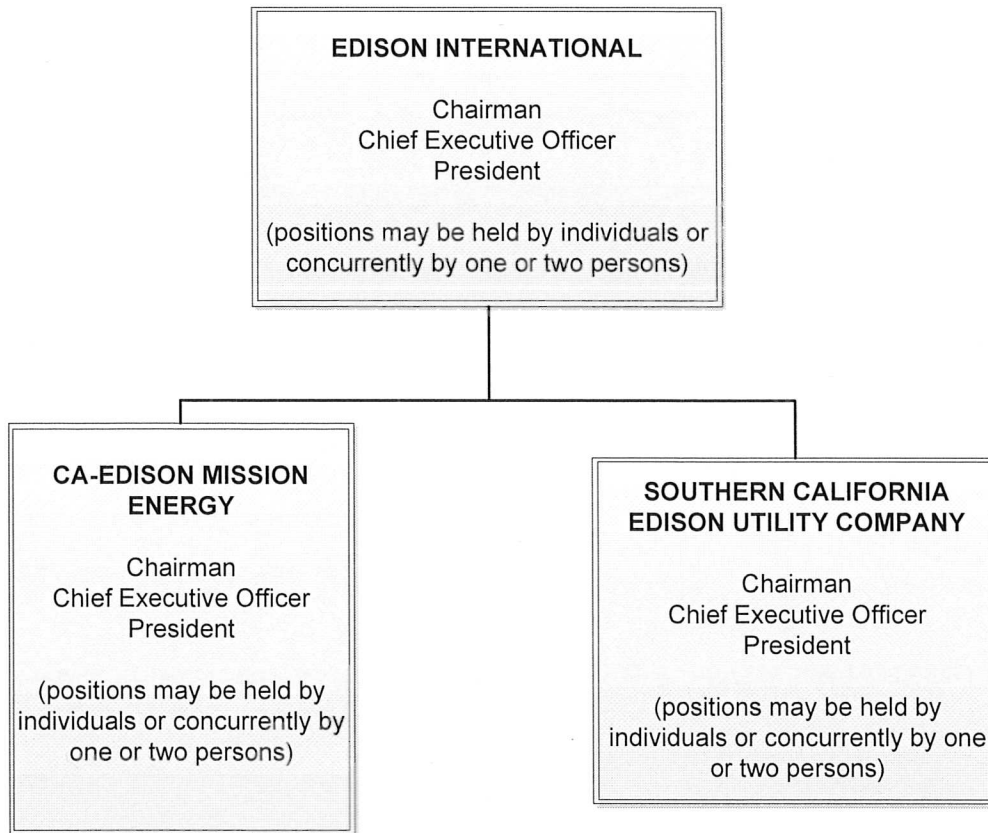
Fire protection procedures provide instructions for implementing the fire protection plan (see Fire Protection Section).

Provisions for human verification of operating and maintenance activities are addressed within station procedures. The extent of human verification depends upon the amount of automatic system status monitoring equipment installed.

4.7 REFERENCES

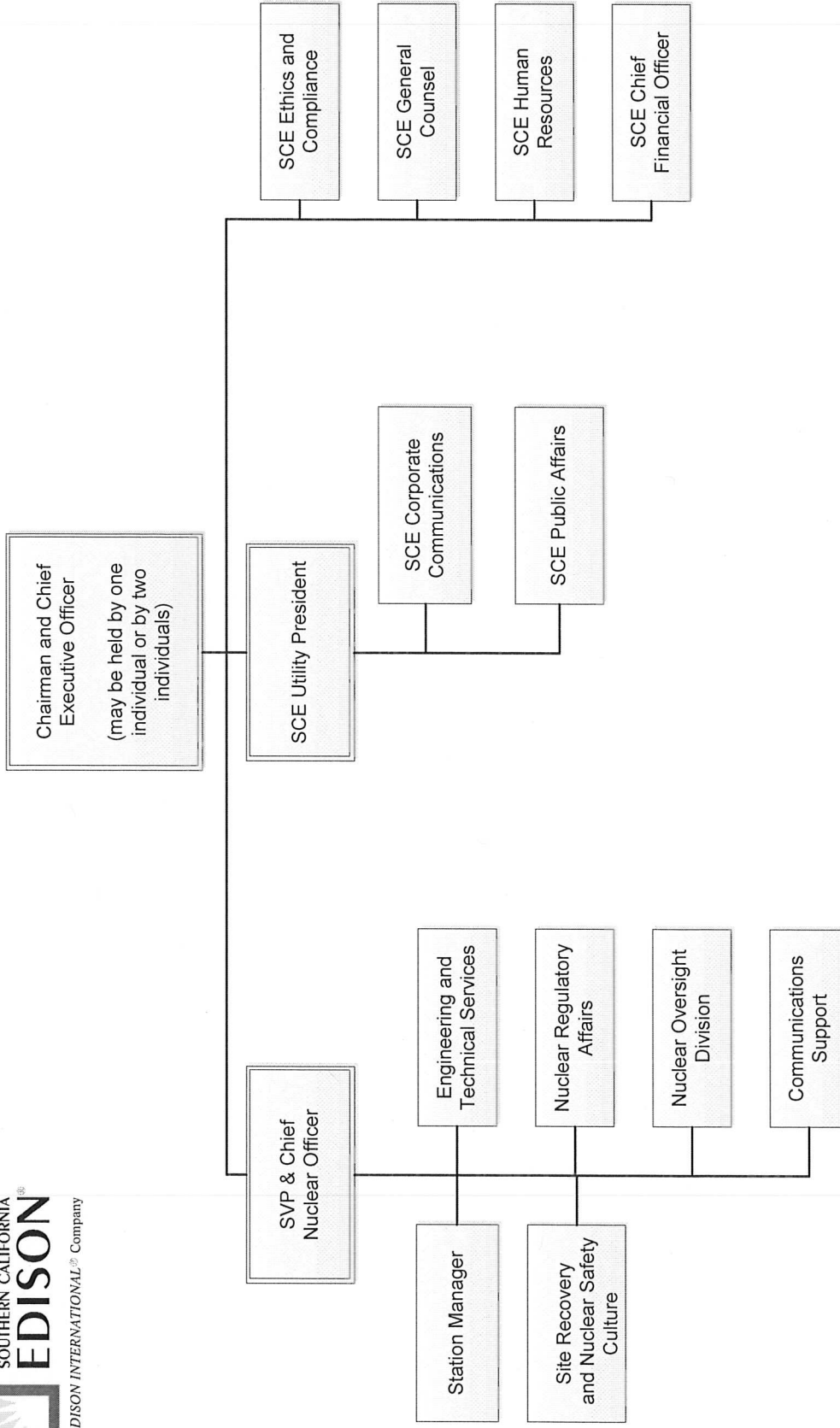
1. (Deleted)
2. "Permanently Defueled Technical Specifications," Amendment No. 155 to License No. DPR-13, Issued December 28, 1993
3. "San Onofre Generating Station Unit 1, Updated Final Safety and Analysis Report," Docket 50-206
4. "Post Shutdown Decommissioning Activities Report (PSDAR)," dated December 15, 1998

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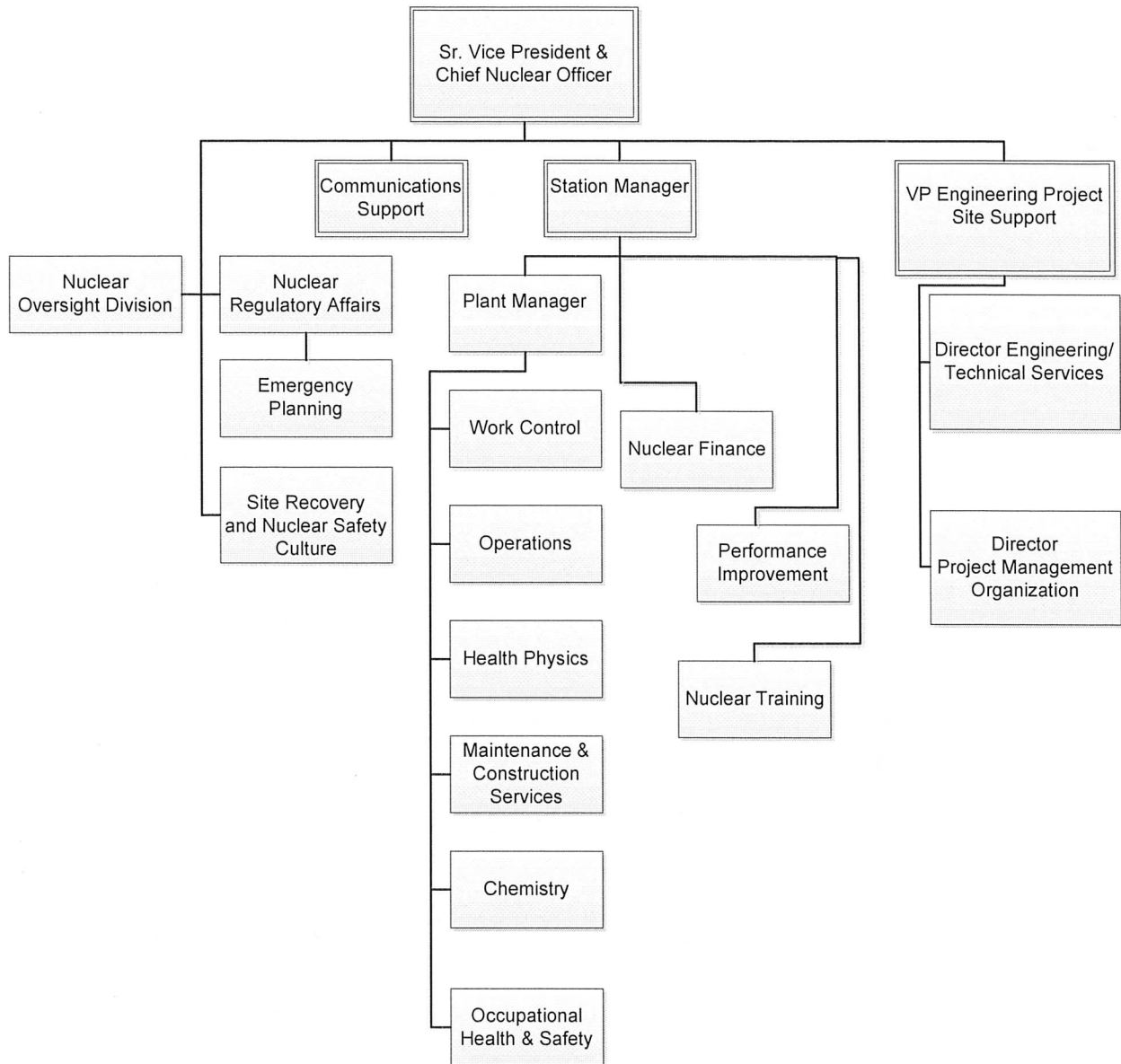
SAN ONOFRE NUCLEAR GENERATING STATION
Unit 1
Defueled Safety Analysis Report
Edison International Companies
Figure 4-1

SOUTHERN CALIFORNIA EDISON COMPANY



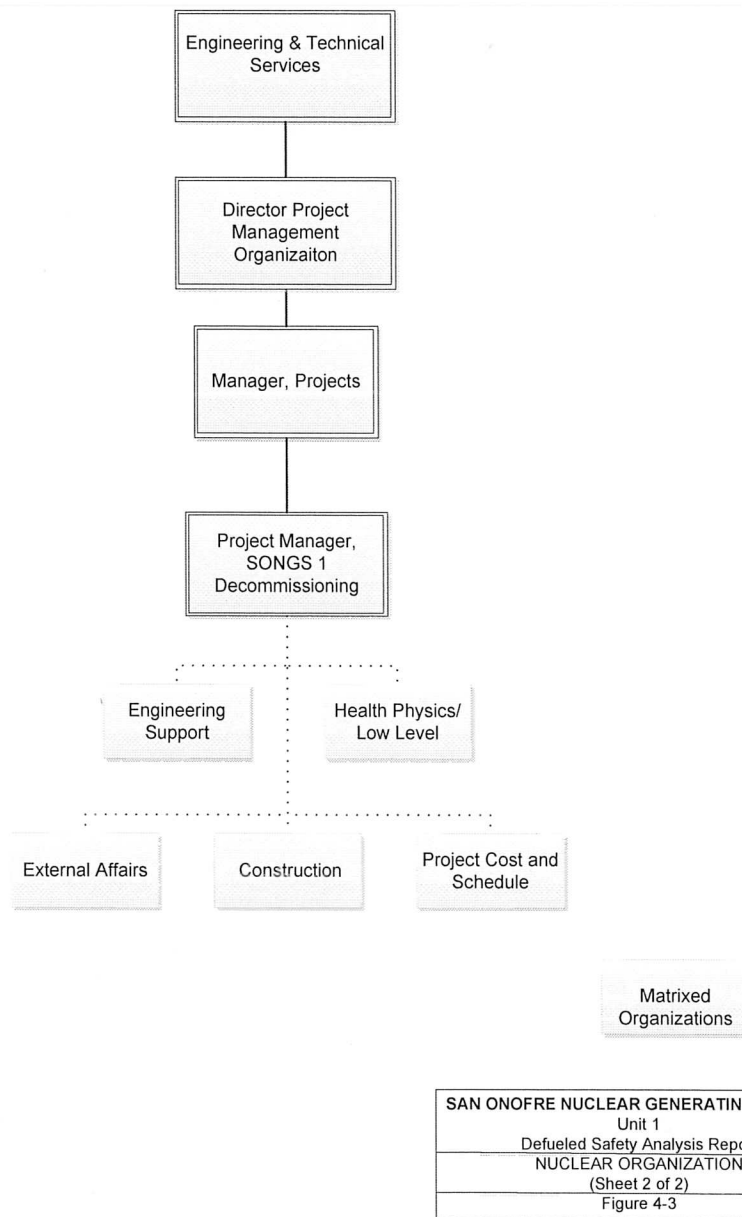
SAN ONOFRE NUCLEAR GENERATING STATION
Unit 1
Defueled Safety Analysis Report
Southern California Edison Business Units
Figure 4-2

NUCLEAR ORGANIZATION

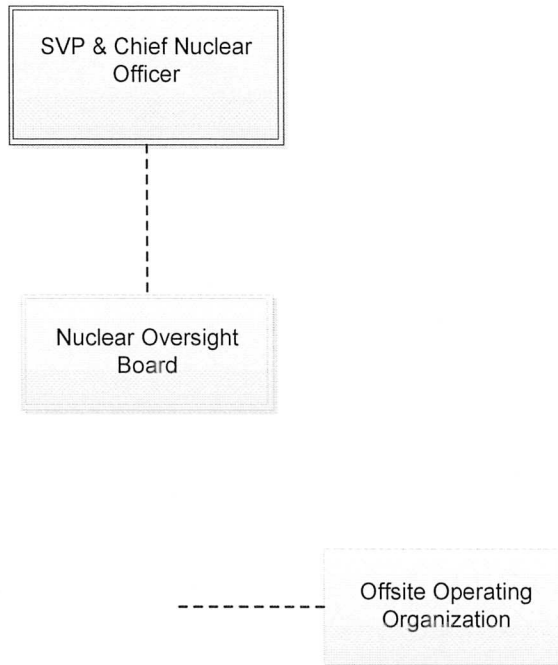


SAN ONOFRE NUCLEAR GENERATING STATION
Unit 1
Defueled Safety Analysis Report
NUCLEAR ORGANIZATION
(Sheet 1 of 2)
Figure 4-3

UNIT 1 DECOMMISSIONING



INDEPENDENT REVIEW ORGANIZATION



SAN ONOFRE NUCLEAR GENERATING STATION
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Defueled Safety Analysis Report
Independent Review Organization
Figure 4-4