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San Onofre Nuclear Generating Station

10CFR50.54(a)
10 CFR 71.106(b)

August 27, 2019

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555-0001

SUBJECT: **Docket Nos. 50-206, 50-361, 50-362, and 72-041**
Decommissioning Quality Assurance Plan
San Onofre Nuclear Generating Station, Units 1, 2, and 3 and the Independent Spent Fuel Storage Installation

REFERENCE Letter from T. J. Palmisano (SCE) to NRC Document Control Desk dated August 9, 2017; Subject: Decommissioning Quality Assurance Plan San Onofre Nuclear Generating Station, Units 1, 2, and 3 and Independent Spent Fuel Storage Installation – (ADAMS Accession No. ML17223A196)

Dear Sir or Madam:

In accordance with the requirements of 10 CFR 50.54 (a) and 10 CFR 71.106 (b) Southern California Edison hereby submits the update to the Decommissioning Quality Assurance Program (DQAP) for San Onofre Units 1, 2, and 3 and the Independent Spent Fuel Storage Installation. (Attachment 1)

A summary of the changes to the DQAP since the referenced submittal is provided in accordance with 10 CFR 50.71(e) in Attachment 2.

There are no commitments contained in this letter or its attachments.

Should there be any questions regarding this submittal, please contact Mr. Albert Bates, Manager, Regulatory Affairs, at (949) 368-6945.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on 8/27/2019
(Date)

Sincerely,

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Attachment 1: Decommissioning Quality Assurance Program (DQAP) Revision 5

Attachment 2: Summary of Changes in the Decommissioning Quality Assurance Program, Revisions 4 and 5

cc: S. Morris, Regional Administrator, NRC Region IV
M. Doell, NRC Project Manager, SONGS Units 1, 2 and 3

Attachment 1

Decommissioning Quality Assurance Program (DQAP)
Revision 5

DECOMMISSIONING QUALITY ASSURANCE PROGRAM (DQAP)

Revision 5

Southern California Edison (SCE)

San Onofre Nuclear Generating Station (SONGS)

Southern California Edison

San Onofre Nuclear Generating Station

Decommissioning Quality Assurance Program (DQAP)

Approvals

1/31/19

Manager, Regulatory Affairs and Nuclear Oversight Date

1/31/19

Vice President of Decommissioning and Chief Nuclear Officer Date

Introduction

Southern California Edison (SCE) announced plans on June 7, 2013, to permanently retire Units 2 and 3 at the San Onofre Nuclear Generating Station (SONGS). On June 12, 2013 SONGS submitted a Certification of Permanent Cessation of Power Operations to the Nuclear Regulatory Commission (NRC), certifying that SCE has permanently ceased power operations of SONGS Units 2 and 3. To address this changing environment at SONGS, a Decommissioning Quality Assurance Program (DQAP) has been developed to support the decommissioning activities of the station (Units 1, 2 & 3) and ensure continued oversight of Decommissioning and the Independent Spent Fuel Storage Installation (ISFSI).

The SONGS DQAP reflects the quality activities pertaining to a decommissioning nuclear site through compliance with established regulatory requirements set forth by the NRC. The DQAP ensures the protection of the public health and safety through performance-based assessments and compliance-based auditing utilizing implementing procedures and instructions. The DQAP describes the responsibilities for implementing quality requirements, establishing and maintaining the DQAP, and assessing the performance of activities subject to the DQAP. The implementation of the SONGS DQAP is performed in a graded approach commensurate with the items and activities importance to safety.

The SONGS DQAP includes a description of the organizational structure and functional responsibilities of the station management regarding the implementation of important to safety activities at SONGS. The DQAP also outlines the oversight roles and responsibilities for the Quality Assurance (QA) staff and program expectations for the various station organizations. The DQAP satisfies the requirements of 10 CFR 50 Appendix B, *Quality Assurance Criteria for Nuclear Power Plants and Fuel Processing Plants*, 10CFR71, Subpart H, *Quality Assurance for Packaging and Transportation of Radioactive Material*, and 10CFR72, Subpart G, *Quality Assurance for Independent Storage of Spent Nuclear Fuel and High-Level Radioactive Waste*. Additional regulatory commitments are listed within Appendix B of the DQAP.

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Organization

1.0 Organization

Southern California Edison (SCE) is responsible for the establishment and execution of the QA Program for the San Onofre Nuclear Generating Station (SONGS). The SCE organizational structure of departments involved with implementing the SONGS DQAP as well as departmental interfaces is presented in Appendix A. The titles of managers used in the DQAP are generic, or functional titles and their formal titles may vary. Unless otherwise specifically prohibited, responsibilities of managers described in the DQAP may be delegated to, and performed by, other qualified individuals.

The ultimate responsibility for operation, maintenance, inspection, test, modification, decommissioning, and storage of spent fuel resides with the SCE President. The Chief Nuclear Officer (CNO) has the overall responsibility for the establishment and execution of the SONGS DQAP.

Responsibilities

The authorities and duties of persons and organizations performing activities affecting the important to safety functions of Structures, Systems, and Components (SSC) are established and delineated in writing. These activities include both the performing functions of attaining quality objectives and the QA functions.

The CNO is responsible for (a) Regulatory Affairs (maintaining licensing documents, submitting routine regulatory agency reports, and for addressing Nuclear Regulatory Commission (NRC) or other regulatory issues); (b) Emergency Preparedness; (c) Decommissioning Projects, (d) Nuclear Oversight and Safety Culture (oversight of quality and safety conscience work environment for activities performed at SONGS), (e) Plant management and (f) the administration and implementation of the DQAP at SONGS. The DQAP is reviewed and approved by the Manager responsible for Nuclear Oversight, and the CNO.

The CNO is responsible for appraising management of the effectiveness of the DQAP implementation and is the arbitrator for non-conformances of unusual complexity. CNO also directs actions to be taken based on reports and trending of quality issues submitted by the Manager responsible for Nuclear Oversight. Direction for implementing the DQAP activities is provided by the CNO through the Manager responsible for Nuclear Oversight.

Management of line organizations at SONGS are responsible to ensure that the quality of organizational work and activities meets the requirements set forth in the DQAP and SONGS implementing procedures.

Nuclear Oversight

The Manager responsible for Nuclear Oversight reports to the CNO and shall not be assigned responsibilities that would prevent the required attention to quality affecting matters. Although reporting to the CNO with other line organizations, the Manager responsible for Nuclear Oversight shall have the necessary independence from other line management to ensure effective oversight for all organizations. The manager has the following responsibilities:

- Management of day-to-day oversight of implementation of the DQAP for all quality activities
- Authority and obligation to raise any conditions adverse to quality to the CNO for resolution

- Assuring quality activities at SONGS are performed in accordance with implementing procedures
- Managing the performance of audits, assessments, and inspections in order to verify that important to safety activities have been correctly performed
- Reporting on oversight activities to the CNO
- Authority to stop work when quality is adversely affected

Nuclear Oversight personnel report directly to the Manager responsible for Nuclear Oversight and implement the relevant provisions of the DQAP utilizing written implementing procedures. They perform independent oversight of line functions and activities. A member of the Nuclear Oversight organization shall not perform oversight of activities for which the member has been directly responsible. Further, they have the responsibility and authority to stop work when quality is adversely affected and immediately raise concerns to the Manager responsible for Nuclear Oversight.

Nuclear Oversight personnel shall have sufficient authority and organizational freedom to identify any quality problems and to verify implementation of corrective actions. Additionally, Nuclear Oversight personnel shall have direct access to appropriate levels of management necessary to perform their function and shall be independent from cost and schedule when opposed to quality and safety considerations.

Station Management

The Manager responsible for Decommissioning Projects reports to the CNO and is responsible for managing all decommissioning project activities being performed at SONGS.

The Manager responsible for Decommissioning Oversight reports to the Manager responsible for Decommissioning Projects.

The Manager responsible for Engineering Oversight reports to the Manager responsible for Decommissioning Oversight with responsibility for design authority.

The Manager responsible for ISFSI Engineering reports to the Plant Manager and is responsible for QA program implementation for systems engineering, engineering programs, engineering design, and engineering for nuclear fuel management.

The Manager responsible for Regulatory Affairs reports to the CNO with responsibilities for maintaining licensing documents, submitting routine regulatory agency reports, and developing strategies for addressing regulatory issues.

The Manager responsible for Emergency Preparedness, reports to the Plant Manager with responsibilities for emergency planning.

The Manager responsible for Radiation Protection and Waste reports to the Manager responsible for Decommissioning Oversight.

The Plant Manager reports to the CNO and is responsible for Operations and Training, ISFSI Engineering, Maintenance and Work Control, Security, Emergency Preparedness and Corrective Action Program (CAP) activities performed at SONGS and ensures all activities are consistent with QA program requirements.

The Independent Safety Reviewer (ISR) performs independent safety reviews of proposed changes, tests and experiments to SSCs, activities, program documents and procedures that are subject to the SONGS DQAP requirements. ISRs shall be individuals without direct responsibility for the performance of activities under review, and shall be competent and knowledgeable in the subject area being reviewed.

Other facility staff shall follow the requirements of section 5.0 *Administrative Controls*, of the SONGS Technical Specifications.

Other Corporate SCE Organizations

- Supply Chain Management is responsible for procurement of materials, equipment and services, material shipping, and for preparation, negotiations, and administration of procurement contracts for SONGS reporting to SCE Corporate Management.
- Corporate Records Center reports to SCE Corporate Management and is responsible for storage and retrieval of company records (including nuclear records) placed in their custody. They interface with site Records Management related to long term storage of nuclear records.
- Information Technology is responsible for managing computer application, computing system, and network services, including nuclear computer program development, technology, and support activities, except plant computer systems.

Delegation of Quality Assurance Work

SCE may delegate the execution of work under the DQAP to others such as contractors, agents, or consultants; however, SCE retains overall responsibility for those activities and the DQAP. Delegation is clearly identified in documentation and SCE retains the right to verify compliance with SCE quality requirements and regulatory requirements applicable to that organization's QA Program.

Reporting

SCE management is involved with QA matters on a continuing basis. Regular reports summarizing the quality of SONGS activities are reviewed and approved by the Manager responsible for Nuclear Oversight. These reports contain status of program adherence to the DQAP, issues identified, unresolved items, and other items of interest to quality activities. These reports are submitted to the CNO and other SONGS management as deemed appropriate.

The CNO shall periodically have an external audit performed to evaluate the effectiveness of the SONGS QA Program. These external audits are performed by individual(s) designated by the CNO who are independent of SONGS oversight activities and who have the appropriate level of expertise in the activities audited. These periodic external audits shall be performed on a 24 month frequency with a 90 day grace period which is not to impact the established 24 month cycle for the audit. The external audit results are communicated via a written report in a timely manner to a level of management having the authority to execute effective corrective action. In addition, these results are reported to the SCE President through the SONGS CNO.

Records

Records of the biennial audit of the QA program including audit plan, checklist, audit report, and the record of completion of corrective action(s) shall be retained in accordance with proper implementing procedures

Quality Assurance Program

2.0 Quality Assurance Program

The QA Program for San Onofre Nuclear Generating Station (SONGS) is described in the Decommissioning Quality Assurance Program (DQAP). This DQAP provides control over activities affecting quality to an extent consistent with their importance to ensure safety and compliance. The DQAP includes specific monitoring activities which are measured against acceptance criteria in a manner sufficient to provide SONGS management assurance that the activities affecting quality are performed in an acceptable manner. The SONGS DQAP requirements apply to regulatory programs and SSCs designated as important to safety which are listed in the engineering Q-List.

The DQAP satisfies the requirements of 10 CFR 50 Appendix B *Quality Assurance Criteria for Nuclear Power Plants and Fuel Processing Plants*, 10CFR71, Subpart H, *Quality Assurance for Packaging and Transportation of Radioactive Material*, and 10CFR72, Subpart G, *Quality Assurance for Independent Storage of Spent Nuclear Fuel and High-Level Radioactive Waste*. Additional regulatory commitments are listed within Appendix B of the DQAP. Implementation of the SONGS DQAP is controlled through separately issued procedures, instructions and drawings. Each organization is responsible for the establishment and implementation of procedures and instructions prescribing the important to safety activities for which they are responsible.

Activities affecting quality shall be accomplished under suitably controlled conditions. Controlled conditions include the use of appropriate equipment; suitable environmental conditions for accomplishing the activity, such as adequate cleanness; and assurance that all prerequisites for the given activity have been satisfied. The QA program takes into account the need for special controls, processes, test equipment, tools, and skills to attain the required quality, and the need for verification of quality by inspection and test.

Changes to the DQAP will be implemented in accordance with 10 CFR 50.54(a) and 10 CFR 71.106.

Program Control and Authority

The Manager responsible for Nuclear Oversight is responsible for ensuring that the applicable portions of the DQAP are properly documented approved and implemented (with trained staff, necessary materials and approved procedures available) before an activity within the scope of the DQAP is executed. Disputes arising between departments or organizations on any QA matter that cannot be resolved at a lower level of management will be referred to the CNO.

Additional requirements for specific programs are described in section 5.0 *Administrative Controls*, of the SONGS Technical Specifications with the exception of security requirements which are contained in the SONGS *Physical Security Plan*; and Emergency Plan requirements which are contained in the SONGS Permanently Defueled Emergency Plan (PDEP). SONGS *Fire Protection Program* requirements are addressed in Appendix C of this DQAP.

Personnel Training and Qualifications

Individual managers are responsible for ensuring that personnel working under their cognizance are provided with the necessary indoctrination training and resources to accomplish assigned activities which fall under the scope of the DQAP.

Members of the SONGS staff (including audit and inspection personnel) shall have the appropriate qualifications necessary to perform their assigned duties defined in implementing procedures listed in Appendix H of the DQAP. These implementing procedures provide the criteria utilized for determining and assessing appropriate staff qualification. Additionally, plant Technical Specifications cite references that stipulate the use of specific industry standards addressing qualifications. Training programs are established and implemented to ensure that personnel achieve and maintain suitable proficiency. Personnel training and qualification records are maintained in accordance with approved procedures.

QA Lead Auditors are qualified and certified by the Manager responsible for Nuclear Oversight in accordance with approved procedures. Training methods, minimum experience requirements, and certification practices are in accordance with established procedures and based on criteria set forth in QA implementing procedures. Proficiency evaluations are performed and documented for individuals leading audits and appropriate certification renewal or re-qualification actions are taken.

Records

Records of the implementation for staff indoctrination and training, as well as records for Lead Auditor, Auditor, Technical Specialist and Inspection Personnel qualification shall be maintained in accordance with approved procedures and show the appropriate documentary evidence of training completion.

Design Control

3.0 Design Control

Design activities shall be controlled to ensure that the design, including applicable regulatory requirements and design bases, technical and quality requirements are correctly translated to design documents which include specifications, drawings, procedures and instructions. Design changes to SSCs that have current important to safety functions shall also be properly controlled using design control measures commensurate with those applied to the original design. Design changes are reviewed and approved by the same design groups cognizant in the discipline affected by the change that reviewed and approved the original documentation unless alternative design groups are designated. Design activities associated with the nuclear station changes or modifications may be performed by SCE or qualified contractors. Design groups shall have access to background information, shall be competent in the specific area of design interest, and shall understand the requirements and intent of the original design.

Measures shall be established for the selection and review for suitability of application of materials, parts, equipment, and processes that are essential to SSCs that have current important to safety functions.

Design control implementing procedures shall define responsibilities for the following:

- Design Input
- Design Performance
- Design Interface Control
- Design Verification
- Design Change

Design inputs shall be identified, documented and correctly translated into design outputs. Design inputs shall be specified to a level of detail necessary to allow the design activities to be carried out in a controlled manner. The final design output shall relate to the design input in sufficient detail to facilitate design verification.

The design organization shall prescribe and document the design activities to the level of detail necessary to permit the design process to be completed in a correct manner which permits verification that the design meets requirements. Design documents shall support facility design, construction, safe storage and handling of spent fuel, and decommissioning projects. Appropriate quality standards shall be identified and documented, and their selection reviewed and approved. Deviations from original design standards shall be reviewed to ensure that the designated quality requirements remain in the design of SSCs that have current important to safety functions.

Design control measures shall be applied to items such as the following: stress, thermal, hydraulic, and accident analyses; compatibility of materials; accessibility for in-service inspection, maintenance, and repair; and delineation of acceptance criteria for inspections and tests for those SSCs that have current important to safety functions. Design analyses shall be sufficiently detailed such that a person technically qualified in the subject can review and understand the analyses and verify the adequacy of the results without additional input.

Interface controls (internal and external between participating design organizations and across technical disciplines) for the purpose of developing, reviewing, approving, releasing, distributing, and revising design inputs and outputs shall be defined in procedures. Design information transmitted across interfaces shall identify the status of the design information or documentation provided.

Changes or modifications to designated SSCs shall be approved by the Design Authority or designee, as specified in administrative procedures. Procedure for implementing design changes and field changes, shall assure that the impact of the change is considered, required actions documented, and information concerning the change transmitted to affected persons or organizations. Applicable regulatory criteria (i.e. 10CFR50.59 or 10CFR72.48) shall be used to determine if NRC approval is required prior to implementation of a design change. For SSCs that have current important to safety functions, these changes shall be subject to design control measures commensurate with those applied to the original design.

Design verification for SSCs that have current important to safety functions shall provide assurance that the final design is correct and has been performed in accordance with approved procedures describing position responsibilities and authorities for the design reviews. Documentation to be reviewed for this design work includes the necessary calculations and/or analysis, design criteria specifications, drawings, procedures, and instructions to permit a comprehensive review.

Design verification may be accomplished through design reviews, alternate calculations, or qualification testing. These alternate methods of design verification are defined in design documentation. Records of design reviews and associated design documents are required by internal written procedures to be maintained in SONGS Records Management.

Design verification shall be performed by competent individuals or groups other than those who performed the original design, but who may be from the same department. Alternative design groups may be used if the assignment is designated by the responsible engineering manager. Design control procedures describe the positions responsible for design reviews and other design verification activities, and their authority and responsibilities. Where a test program is used to verify the adequacy of a specific design feature in lieu of other verifying or checking processes, it shall include suitable qualification testing of a prototype unit under the most adverse design conditions. The results of the design verification activities shall be documented with the identification of the verifier clearly documented. Design verification shall be completed prior to relying upon the SSC to perform its function.

Nonconforming activities such as deviations, errors, or deficiencies in the approved design documents, including design methods (e.g., computer codes), shall be controlled. Computer programs used to calculate or develop important to safety data shall be subject to validation and verification. Procedure shall assure that verified computer codes are certified for use and that their applicability is specified.

Design documentation and records which provide evidence that the design and design verification process was performed in accordance with the DQAP, shall be collected, stored and maintained in accordance with approved procedures. This documentation includes final design documents, such as drawings, specifications, calculations, and revisions there to and documentation which identifies important steps, including sources of design inputs that support the final design.

Procurement Document Control

4.0 Procurement Document Control

SCE establishes measures to ensure that applicable requirements necessary to assure adequate quality requirements are included or referenced in procurement documents for material, equipment, and services which are designated as important to safety, identified in SONGS Q-list, or required by SONGS Technical Specifications whether they are purchased by SCE or by its contractors or subcontractors.

Measures are established to assure that the applicable requirements are included or referenced in documents for procurement of materials, equipment, and services for the design, fabrication, and use during decommissioning activities and of packaging for radioactive material. Measures are established to assure that, to the extent necessary, contractors or subcontractors provide a QA Program consistent with the applicable provisions of 10 CFR 50 Appendix B, 10 CFR 71 Subpart H, and 10 CFR 72 Subpart G.

Procurement document control applies to SSCs that are identified in the SONGS Q-List as important to safety and any spare or replacement parts for those SSCs. Procurement documents shall include those requirements necessary to assure that the items and services to be provided meet the specified technical and quality requirements. Specifically, the procurement system assures that the appropriate technical and quality requirements are specified for procurement of items and services considering the important to safety function, complexity of the design, manufacturing, degree of inspectability, and testability upon receipt and other factors which affect the quality of products and services.

Procedures that implement procurement document control shall describe the organizational responsibilities for procurement planning; preparation, review, approval and control of procurement documents; supplier selection; bid evaluation; identification of replacement parts where applicable, and review and evaluation of supplier's QA Program prior to initiation of activities affected by the DQAP.

Procedures shall be established to review the adequacy of the technical and QA requirements specified within procurement documents. The review shall determine whether the requirements are correctly specified, inspectable and controlled. Appropriate acceptance / rejection criteria shall be clearly specified. The review and documented concurrence with respect to the adequacy of technical and QA requirements specified with procurement documents shall be performed by independent personnel who have been trained and qualified to applicable QA practices and concepts.

Changes to procurement documents shall be subject to the same controls and the original documents.

Instructions, Procedures and Drawings

5.0 Instructions, Procedures and Drawings

SCE establishes measures to assure that quality activities are prescribed by and performed in accordance with documented instructions, procedures, or drawings. Documented and approved instructions, procedures, and drawings are required to accomplish important to safety work. These instructions, procedures, and drawings include, as appropriate, quantitative or qualitative acceptance criteria for determining that activities have been satisfactorily accomplished. Controls are established which ensure that instructions, procedures, and drawings are current and accurately reflect plant design and regulatory requirements.

Changes or deviations from established instructions, procedures or drawings for SSCs and other quality activities that have current important to safety functions, require the same review and approval as the original document. Instructions, procedures and drawings, including changes and deviations subject to the SONGS DQAP, shall be maintained and reviewed periodically as required by administrative procedures.

Administrative controls shall be established that provide the methods by which temporary changes can be made to procedures which are approved, including the designation of persons authorized to approve such changes. These changes shall be documented and, if appropriate, incorporated into the next revision of the affected procedure.

Documents comprising instructions, procedures, specifications, and drawings prepared by outside contractors for the performance of site activities are reviewed and approved by the responsible SONGS manager or designated representative.

Document Control

6.0 Document Control

SCE establishes measures to control the issuance of documents, such as instructions, procedures, drawings and other document or records, including changes thereto, which prescribe activities affecting quality. These measures assure that documents, such as procedures, instructions and drawings, are available for use in quality activities. Written procedures shall define the type of documents to which the document control system applies. These procedures also define the process for controlling the preparation, review, approval, issuance, and distribution of documents affecting quality.

Documents and changes to documents that prescribe or verify activities affecting quality shall be controlled in a manner that precludes the use of inappropriate or outdated documents. The document control system procedures shall be established to identify the current revision of instructions, procedures, specifications, drawing and procurement documents.

Procedures and instructions shall assure that documents are reviewed by qualified personnel, other than the personnel who prepared the documents. These procedures and instructions shall also assure that documents are approved for release by authorized personnel, distributed (as appropriate) to the location where the activity is being performed prior to the commencement of work, and utilized and adhered to when conducting activities. The reviewing organization shall have access to pertinent background data and information upon which to base their approval.

Changes to documents for SSCs that have current important to safety functions or other quality activities shall be reviewed and approved by the same organization that performed the original review and approval unless SCE designates another responsible organization. Minor changes to documents, such as inconsequential editorial corrections, shall 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 decision shall be clearly delineated.

Procedures, instructions and other documents, including revisions, which implement requirements of the SONGS DQAP, shall be reviewed and concurred with by Nuclear Oversight.

Control of Purchased Materials, Equipment and Services

7.0 Control of Purchased Materials, Equipment and Services

Control of purchased material, equipment, and services applies to SSCs and associated activities that are designated as important to safety or other quality related activities. Supplier activities that provide purchased material, equipment, and services shall be monitored as necessary to assure such items and services meet procurement document requirements. These measures shall include provisions, as appropriate, for source evaluation and selection, objective evidence of quality furnished by the contractor or subcontractor, inspection at the contractor or subcontractor source, and examination of products upon delivery. Procedures shall describe each organization's responsibilities for the control of purchased material, equipment, and services, including the interfaces between all affected organizations.

Materials, equipment, and services shall meet the specified technical and quality requirements. Verification that a supplier can meet the specified technical and quality requirements shall be documented. A Supplier's QA Program that satisfies specified quality requirements shall be listed on the SONGS Evaluated Suppliers List. The SONGS Evaluated Suppliers List shall be controlled. The suppliers of calibration services for SONGS will be qualified to perform calibrations by fully satisfying all regulatory requirements, specifically an approved Appendix B calibration program.

The effectiveness of contractors and supplier's QA program shall be assessed at intervals consistent with the importance, complexity, and quantity of the product or service. Supplier performance and compliance with procurement documents are monitored by source verification, receipt inspection, or a combination of the two. Receiving inspection shall verify by objective evidence the acceptability of items in accordance with facility procedures. Accepted items are appropriately marked, removed from the inspection area, and located in a controlled storage area until use. Documentary evidence shall be retained at SONGS and shall be sufficient to identify the specific requirements, such as codes, standards, or specifications, met by the purchased material and equipment.

For the acquiring of services only, such as third-party inspection, engineering and consulting services; auditing and installation; repair, overhaul, or maintenance work, from suppliers whose QA Program has not been reviewed or accepted, those suppliers may be used provided additional controls such as technical verification of data produced, surveillance and/or audit of the activity, or review of objective evidence are employed. These additional controls shall be documented in the request for services and approved by the appropriate level of management.

Due to the elimination of all active safety related components at SONGS based on the decommissioning status of the site, SCE will no longer perform Commercial Grade Dedication of parts or components. If future needs for CGD arise, SONGS will use qualified contracted services with an approved and established CGD program. Designated quality personnel or other personnel with appropriate qualifications are responsible for assuring source inspections, surveys, or audits of suppliers are performed as necessary. Documentation of acceptance shall be available prior to installation or acceptance for use.

Identification and Control of Materials, Parts and Components

8.0 Identification and Control of Materials, Parts and Components

SCE establishes measures for the identification and control of material, parts, and components, including partially fabricated assemblies, obtained for use in important to safety activities necessary to prevent the use of incorrect or defective items. SONGS shall establish a process for the identification and control of items to ensure only accepted materials, parts and components are available for use in important to safety activities. Implementing procedures shall describe the organizational responsibilities and controls in place at SONGS to assure that only correct and accepted items are utilized.

Identification is maintained either on the items or documents traceable to the items. When such controls are required, the following methods of identification and control are to be utilized. Identification such as batch, heat number, lot, serial number or part number is maintained from initial receipt up to and including installation, and throughout the use of the items. The identification relates the item to the applicable design or other specification document when appropriate. SONGS utilizes physical identification when possible. Other means, including physical separation or procedural controls are utilized when physical identification is not practical.

Markings are applied using materials and methods that are clear, legible and do not detrimentally affect the function or service life of the items that are marked. Markings are transferred to each part of an identified item when subdivided. Markings are not obliterated or masked by surface treatments or coatings unless alternative identification methods are established. When codes, standards, or specifications require specific identification or traceability requirements of an item, procedures shall describe how to maintain traceability to specification, grade of material, heat, batch, lot, part or serial number, or inspection / test or other record.

Provisions are made in procedures for maintenance or replacement of markings or identification due to damage from handling or aging, excessive deterioration due to environmental exposure, and for updating records while in storage.

Items having limited calendar or operating life are controlled to preclude use after the shelf life or operating life has expired.

Verification of correct identification of material, parts, and components is accomplished and documented prior to release for fabrication, assembly, shipment, construction, or installation and use. The record of verification is maintained for the period provided in the governing procurement document, specification, drawing, procedure, or instruction.

Control of Special Processes

9.0 Control of Special Processes

SCE establishes measures to assure that special processes, including welding, heat treatment, chemical cleaning and nondestructive testing, are controlled and accomplished by qualified personnel using approved written procedures in accordance with applicable codes, standards, specifications, criteria and other special requirements.

A special process is an activity, in which the quality of the result is highly dependent upon either a process variable or the skill and experience of the individual performing the activity; and the specified quality is difficult to verify by inspection and test after the process evolutions are completed.

Special processes shall be controlled by instructions, procedures, drawings, checklists, travelers, or other appropriate means. Special process instructions shall include or reference procedure, personnel, and equipment qualification requirements and specific conditions where they are necessary for accomplishment of the process. These conditions shall include proper equipment, controlled parameters of the process, specified environment, and any equipment calibration requirements. Equipment used for special processes shall be maintained, stored, issued and qualified in accordance with applicable procedures and operated by qualified personnel.

The implementing procedures or instructions shall specify the acceptance criteria for special process control and ensure compliance with applicable codes, standards, QA procedures and design specifications.

Records of personnel and equipment qualification and results of special processes shall be maintained in accordance with approved procedures.

Inspection

10.0 Inspection

SCE establishes and executes measures for inspection of important to safety activities, by or for the organization performing the activity, in order to verify conformance with approved instructions, procedures, drawings, and specifications for accomplishing the activities. A comprehensive program of inspections shall be established and implemented to verify conformance of an item or activity with the specified requirements and inspection methods used contained in approved inspection procedures, instructions, drawings and checklists. Inspections will be performed by personnel qualified to validate that the activities meet this acceptance criteria specified in applicable design documents. Examinations, measurements, or tests of material or products processed shall be performed for each work operation where necessary to assure quality recording evidence of completing and verifying a manufacturing, inspection, or test operation. Inspections shall be performed by qualified individuals other than those who perform or directly supervise the activity being inspected. While performing the inspection activity, inspectors functionally report to the Manager responsible for Nuclear Oversight.

Where mandatory hold or witness points are required for witness or inspection activities by designated personnel, the designated hold points shall be indicated in appropriate documentation. Work shall not progress beyond the point of an assigned hold point unless work is complete or consent to waive the hold point is given by the designated organization.

Inspections shall be planned ensuring characteristic to be inspected, methods used to perform the inspection and acceptance criteria are documented. If inspection of processed or fabricated items is impractical monitoring of the processing method and equipment shall be utilized. Process monitoring shall be performed by qualified personnel or a qualified automated process. Inspection and process monitoring shall both be used if quality control is inadequate without both.

Final inspection shall include records review and examinations, measurements or tests to verify adequate quality measures were employed in the construction, fabrication or processing. Final inspection results shall document the as-found condition including final acceptance / rejection criteria evaluation. Unacceptable inspection results shall be evaluated and resolved in accordance with approved procedures. Any modifications, repairs and replacements are re-inspected to the same standard or method to verify acceptability for items that have current important to safety functions.

Inspection records shall be maintained in accordance with approve procedures and processes.

Test Control

11.0 Test Control

SCE establishes measures for a test program to demonstrate that important to safety SSCs will perform satisfactorily in service. Specifically, a program for testing shall be executed as necessary in order to demonstrate that important to safety SSCs will perform satisfactorily in service. This program shall ensure that the necessary testing is identified and performed at the appropriate time in accordance with approved test procedures which incorporate or reference the requirements, and acceptance criteria specified within applicable design documents.

The test program shall include, as appropriate, proof tests prior to installation, preoperational tests, and operational tests of SSCs. The procedures that implement testing shall specify the appropriate prerequisites for the test (e.g. test personnel qualification requirements, environmental conditions, specification of instrumentation, safety measures, and completeness of tested item), sufficient instruction for the performance of the test, hold or witness points, acceptance / rejection criteria and limits, and the required test documentation. Test results are evaluated by qualified personnel to determine compliance with established acceptance criteria. Test results which do not meet acceptance criteria, shall be documented and evaluated in order to determine the appropriate corrective actions. The test program shall require that modifications, repairs, and replacement of items that have current important to safety functions be tested, utilizing the same criteria as the original items to the extent applicable to the current safety functions. If alternative tests are required, the alternative tests must be reviewed and approved by the same organization that established the original requirements unless SCE designates another responsible organization.

Test records shall be maintained in accordance with approved procedures.

Control of Measuring and Test Equipment

12.0 Control of Measuring and Test Equipment

SCE establishes measures to assure that permanent plant instrumentation and tools, gages, instruments, and other measuring and test equipment (M&TE), used in important to safety activities, are controlled, calibrated and adjusted in order to maintain accuracy within necessary limits. Organizational responsibilities shall be delineated for establishing, implementing, and assuring the effectiveness of the calibration program for M&TE. Reference standards used to determine the acceptability of items and activities, shall be of appropriate type, and maintained within prescribed accuracy limits, suitable range and accuracy in order to verify conformance to specified requirements.

Procedures for the control and calibration of permanently installed plant equipment shall specify identification requirements (labeling, codes, or other documented control system), the recall process and calibration process and frequencies (including documented pre-calibration checks) of the M&TE to nationally recognized standards. Calibration methods are documented and performed by competent personnel in an environment that does not adversely affect the calibration. The calibration procedures shall specify recording of as-found conditions and a means for determining which equipment shall be included in the calibration program. M&TE used in the calibration of permanently installed plant equipment shall have ranges, precision, and accuracy equal to or greater than that to be calibrated and where this is impractical; the cognizant authority shall document rationale for accuracy.

Procedures for the control of M&TE used to calibrate permanent plant equipment and other important to safety activities shall specify identification requirements (labeling, codes, or other documented control system), the recall process and calibration process and frequencies (including documented pre-calibration checks) of the M&TE to nationally recognized standards. Calibration methods are documented and performed by qualified personnel in an environment that does not adversely affect the calibration. The calibration procedures shall delineate special controls where applicable, for usage, handling and storage required for environmental conditions such as temperature, humidity, cleanliness, or radiation, in order to maintain accuracy and operating characteristics of the M&TE.

Calibration reference standards shall be based on nationally recognized standards or accepted values of natural physical constants. Where national standards do not exist, the basis for the calibration shall be documented. Special calibration and control measures are not required when normal commercial practices provide adequate accuracy (e.g. rulers, tape measures, level, and other such devices).

M&TE is calibrated at specified intervals or immediately before use on the basis of the item's required accuracy, intended used, frequency of use, stability characteristics and other conditions affecting its performance. As-found condition of M&TE shall be recorded. The calibration intervals, whether calendar or usage based, shall be pre-determined and to the extent practical, be consistent with the instrument manufacture's specified repeatability and/or the user's experience. Calibration reference standards shall be based on traceability to nationally recognized standards or accepted values of natural physical constants. Where national standards do not exist, M&TE is calibrated against standards that have an accuracy of at least four (4) times the required accuracy of the equipment being calibrated, or when this is not possible, have an accuracy that ensures the equipment being calibrated will be within the required tolerance. Indication of expiration, if feasible, will be displayed on or with the M&TE.

M&TE which is found to be damaged, out-of-calibration or for which accuracy is suspect, shall be tagged and segregated, and a special calibration performed. M&TE found to be out of calibration shall be

evaluated and documented. The acceptability shall be determined of items measured, inspected, or tested with a damaged or out of calibration device.

Records of M&TE calibration results (including as-found conditions) shall be maintained. Additionally, records of M&TE usage shall be maintained, so that measures may be executed to determine the validity of previous measurements performed, and the acceptability of items inspected or tested since the previous calibration when the M&TE was not suspect.

Handling, Storage and Shipping

13.0 Handling, Storage and Shipping

SCE establishes measures to control the handling, storage, shipping, cleaning and preservation of important to safety items, material and equipment, in accordance with work and inspection instructions, in order to prevent damage or deterioration.

Measures and controls shall be established ensuring items, material and equipment are handled, stored and shipped in accordance with design and procurement requirements, in a manner that will prevent damage, deterioration or loss. Special handling, preservation, storage, cleaning, packaging and shipping requirements are established and accomplished by trained personnel in accordance with approved procedures and instructions.

Special coverings, equipment and protective environments shall be specified and provided where necessary for the protection of items, material, and equipment from damage and deterioration. Special protective measures are specified and provided when required to maintain acceptable quality. When special protective features are required, their existence shall be verified and monitored as necessary to assure that the special protective features continue to serve its intended function. Special handling tools and equipment shall be provided where necessary to ensure items, material and equipment can be handled safely and without damage.

Markings or labeling shall be used to indicate the presence of special environments, or the need for special controls. Provisions shall be described for the storage of chemicals, reagents (including control of shelf life), lubricants and other combustible materials.

Inspection, Test and Operating Status

14.0 Inspection, Test and Operating Status

SCE establishes measures for indicating the status of important to safety items undergoing inspections and tests to prevent the unintentional bypass of required inspections or tests. In addition, SCE establishes measures for indicating the operating status of important to safety components and systems to prevent their inadvertent operation.

The methods used to indicate inspection, test and operating status including control of these status indicators are prescribed by approved procedures. The inspection, test and/or operating status of material, equipment and operating systems shall be readily apparent and verifiable.

The procedures used to indicate status shall provide means for assuring inspections and tests are performed in the prescribed sequence, and acceptability is indicated in order to prevent inadvertent operation. Items accepted and released are identified to indicate their inspection status prior to forwarding the items to a controlled storage area or releasing the item for installation or further work. Deviations from the required sequence shall be subject to the same level of control as the generation of the original sequence to prevent the bypassing or omission of required test or inspection. The operating status of nonconforming, inoperable or malfunctioning SSCs shall be identified and documented to prevent inadvertent operation. A system of markings is used to identify the status of material, equipment, work, testing, and operations. Identification of status may be by such means as, but not limited to tags, stamps, markings, labels, log books, or travelers. In some situations, records traceable to the item may be used. The procedures implementing control of inspections test, and operating status shall delineate authority for the application, change, or removal of status identifiers.

Non-conforming Materials, Parts or Components

15.0 Nonconforming Materials, Parts or Components

SCE establishes measures to control important to safety materials, parts and components which do not conform to requirements. The measures used to control nonconforming materials, parts and components are described by approved procedures.

Items received, constructed for, or installed at SONGS that do not meet specific requirements of the procurement documentation, testing or inspection, are to be identified as nonconforming items and notification is to be made to the affected organizations. Deviations pertaining to a characteristic of a material, component, system, or structure, from those specified in the design documents are treated as nonconformances. Items identified as nonconforming require a corrective action document to be written and the affected organizations informed in accordance with approved procedures. Nonconforming items identified through receipt inspection are processed by Engineering through the use of a corrective action document. Supplier nonconformances are processed by Nuclear Oversight through the use of corrective action documents.

When an item is identified as being nonconforming, the individual identifying the nonconformance initiates a corrective action document and the item is required to be identified and marked as such in accordance with approved procedures. Items marked as nonconforming are to be segregated from other incoming and accepted items and controlled to prevent release and inadvertent use. Items that are impractical to segregate (e.g. items that have been constructed or installed) other precautions will be taken to ensure against the item's release and inadvertent use.

An engineering review process controlled by approved SONGS procedures is to be used to evaluate nonconforming items for reportability and final disposition. Nonconforming items discovered in installed items are evaluated to determine their operability and use is controlled until the final disposition of the nonconformance and associated disposition implementation. Personnel performing the engineering evaluations shall have a demonstrated knowledge of the item and its use, knowledge of the requirements and access to necessary background information. Nonconforming items are evaluated and either accepted to be used as-is, rejected, repaired or reworked. Procedures are established to ensure that items that are accepted for use as-is, conditional release, or repaired have a technical justification documented before the item can be released for use. Items that are designated for repair or rework are re-inspected upon completion of the repair or rework to ensure that the repaired or reworked item meets applicable requirements, or there is a technical justification, prior to being released for use in the facility.

Nonconformance documentation is maintained in an electronic storage medium for retention and storage in accordance with approved procedures.

Corrective Action

16.0 Corrective Action

SCE establishes measures to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, defective material and equipment, and nonconformances, are promptly identified, evaluated and corrected using the Corrective Action Program. For Significant Conditions Adverse to Quality, measures shall assure that the cause of the condition is determined, documented, and corrective action taken to preclude the likelihood of repetition. The timeliness of activities and the level of management review shall be commensurate with the significance of the condition.

Each individual working at SONGS is responsible for prompt identification and reporting of any conditions that are adverse to quality by generating corrective action document. Management at all levels encourages the identification of conditions that are adverse to quality and is committed to supporting an expeditious and objective review of the issue with the completion of effective corrective actions to resolve the issue.

The Corrective Action Program and implementing procedures will ensure prompt identification, documentation, classification, evaluation, reporting requirements and correction of conditions adverse to quality. The timeliness of corrective actions will be commensurate with the significance of the condition.

For Significant Conditions Adverse to Quality, procedures provide measures to determine the cause, implement corrective actions to preclude the likelihood of repetition, and report the cause and corrective actions taken to appropriate levels of management.

Follow-up reviews shall be performed in order to verify the implementation and completion of corrective actions taken to assure effectiveness in addressing the significant conditions adverse to quality. Reports of conditions adverse to quality are analyzed to identify pervasive trends in quality performance and are reported to appropriate levels of management for review and assessment.

Quality Assurance Records

17.0 Quality Assurance Records

SCE establishes measures to assure that required QA records are properly identified, stored, maintained, retained, and retrievable to provide objective evidence that important to safety activities are in compliance with the regulations and station implementing procedures. Document Management Centers (DMC) are established by the Records Management organization at predetermined locations for storage, indexing, maintenance, and retention of records. The management of records shall be accomplished through the use of a document control program utilizing approved procedures. Documents identified as records will be clean, and legible. Records shall have traceability to items and activities for important to safety work, and provide objective evidence of the work or activity. These records shall be classified by the Records Management organization as life-time or non-permanent with a specified retention period for non-permanent records. Guidance on storage, retention and handling of records are also controlled in approved SONGS implementing procedures.

Access to records is controlled by authorized personnel who are designated by approved procedures. Access to and retrieval of records, which are being maintained within schedule retention, is based on a need to know and is controlled by approved procedures.

Requirements and responsibilities for record transmittals, retention, and maintenance subsequent to completion of work are consistent with applicable codes, standards, procurement documents, Technical Specifications, Certificate of Compliance (C of C), and the DQAP. The review, identification, indexing, categorization and filing of records are accomplished in accordance with approved procedures. These procedures include provisions for ready identification and retrievability of stored documents. Documents released for schedule retention by responsible organization are protected against deterioration or destruction from fire, flooding, theft, and environmental conditions such as temperature and humidity.

For the ISFSI, records pertaining to the design, fabrication, erection, testing, maintenance, and use of structures, systems, and components considered important to safety shall be maintained in the DMC or by the Certificate Holder until the NRC terminates the license or the C of C.

Requirements for the electronic storage of records will be in accordance with approved procedures. Electronic QA records including backup copies are stored in two redundant electronic media storage systems at physically-independent electronic locations. QA records in electronic format (e.g. pdf format) may be filed and stored on the electronic media storage systems. Selected QA records on other media (e.g. paper hardcopies, microfilm, DVDs) are maintained in a Permanent Records Storage Facility. Records generated for SSCs that were once classified as safety-related or quality-related but no longer have a safety function do not need to be retained for purposes of the DQAP (but may need to be retained for other purposes, such as compliance with 10 CFR 50.75(g), other regulations, or the Technical Specifications, or for business reasons).

Audits

18.0 Audits

SCE establishes measures for a system of planned and documented audits in order to verify compliance with all aspects of the DQAP, and determine the effective implementation of programs covered by the DQAP. QA internal and supplier audits are planned and performed by Nuclear Oversight personnel trained in SONGS audit techniques utilizing SONGS approved written procedures and/or checklists. External audits by licensees / utilities, Contractors, or Consultants acting for SCE to satisfy SCE audit requirements shall have the results evaluated by SCE to ensure acceptability.

Lead Auditors shall have experience, training or qualifications commensurate with the scope and complexity of their audit responsibility. Individuals performing audits shall not have direct responsibilities in the areas being audited.

Scheduling, preparation, personnel selection, performance, reporting, response, follow-up, and records management for audits are performed in accordance with written procedures. Audit scopes and schedules are based upon the status of work progress, important to safety activities being performed, regulatory requirements and prior experience with the organization being audited. Internal audits for the SONGS Decommissioning Quality Assurance Plan (DQAP) shall continue on a 24-month cycle with a 90 day grace period. Grace periods are not intended to be used repetitively, merely as an administrative convenience to extend audit intervals. Therefore, the next performance due date is based on the originally scheduled date.

When specific audits are identified as requiring a more frequent periodicity, for example, annual audits of Emergency Preparedness and Safeguards, the shortest periodicity will be adhered to for activities covered by those specific regulatory requirements. The frequency of internal audits will be prescribed by the plant implementing procedure which governs the conduct of QA audits.

An audit schedule shall be maintained and revised at least annually, to ensure that programs receive necessary audits to support regulatory compliance. Additional audits may be added to the schedule to supplement audits of specific subjects when necessary to provide adequate coverage.

External audits of suppliers providing important to safety materials, parts, equipment or services are scheduled and performed based on the importance of the activity and to confirm implementation of the supplier's QA Program at a frequency of not less than three (3) years with a 90 day grace period. The supplier audit requirement shall not apply to standard off-the-shelf items and bulk commodities where required quality can adequately be determined by receipt inspection or post-installation test.

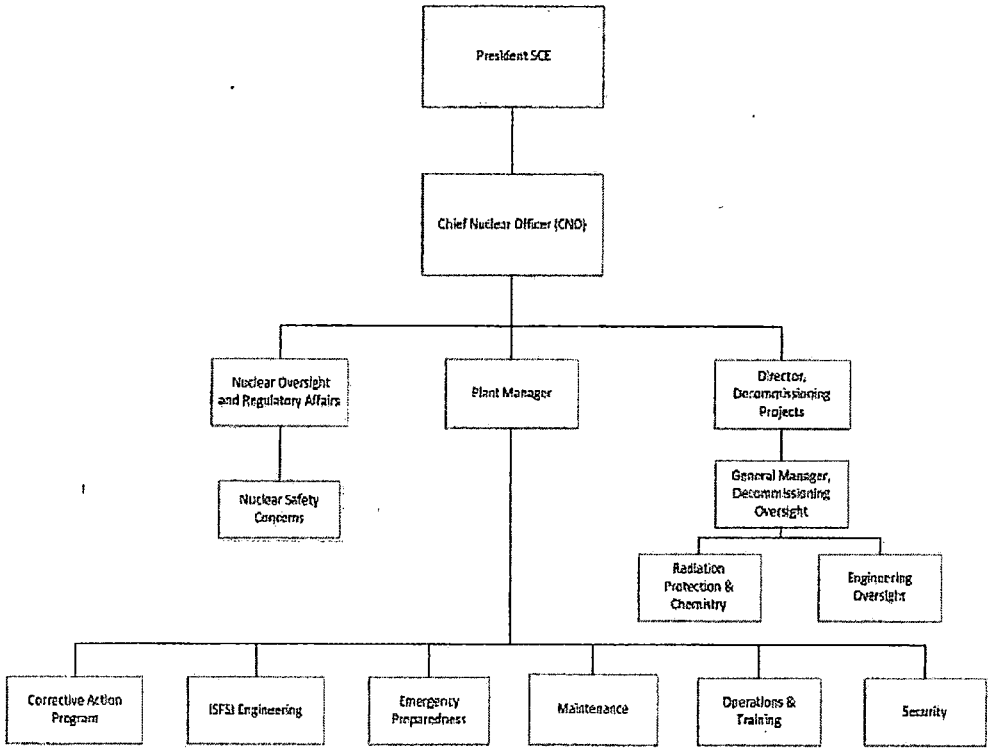
Audit reports shall be prepared, reviewed, approved and distributed in accordance with approved procedures.

Results of audits are reviewed with the management of the organization audited during exit interviews and are documented in formal audit reports to SONGS management. Responsible management in the areas audited shall implement the necessary corrective actions required to address deficiencies. These actions are documented and reviewed periodically and, if needed, re-examined during re-audits of the subject area to verify deficient areas have completed corrective actions.

Audit records including audit plans, checklists, audit reports, written replies, and the record of completion of corrective action shall be retained in accordance with proper implementing procedures.

Appendix A: Organization Chart

Nuclear Site Management Organization



Appendix B – Regulatory Requirements and Commitments

Regulatory Commitments

1. 10 CFR 50 Appendix B, *Quality Assurance Criteria for Nuclear Power Plants and Fuel Processing Plants.*
2. 10 CFR 71 Subpart H, *Quality Assurance for Packaging and Transportation of Radioactive Material.*
3. 10 CFR 72, Subpart G, *Quality Assurance for Independent Storage of Spent Nuclear Fuel and High-Level Radioactive Waste.*
4. Regulatory Guide 7.10, *"Establishing Quality Assurance Programs for Packaging Used in the Transportation of Radioactive Material"* (Revision 2 – March 2005), with exception to the annual audit frequency. SONGS is on a 24-month audit frequency in accordance with implementing plant procedures.
5. NUREG/CR-6407, *Classification of Transportation Packaging and Dry Fuel Storage System Components According to Important to Safety (2/96).*
6. Regulatory Guide 1.191, *Fire Protection Program For Nuclear Power Plants During Decommissioning and Permanent Shutdown (May 2001).*
7. NRC RIS 2000-18, *Guidance on Managing Quality Assurance Records in Electronic Media.*

Exception:

- In lieu of adopting NIRMA Guidelines TG-11-1998, TG15-1998, TG-16-1998, and TG21-1998, SONGS adopts TG11-2011, TG15-2011, TG16-2011, and TG21-2011..

Appendix C: Quality Assurance Program for Fire Protection Program

Scope:

The fire protection program consists of components, procedures, and personnel utilized in carrying out activities of fire protection including such things as fire prevention, detection, annunciation, control, confinement, suppression, extinguishment, administrative procedures, inspection, testing, maintenance, and training. With respect to the decommissioned Units 2 and 3, the NRC regulation for the Fire Protection Program is 10CFR50.48(f). Additionally, NRC Regulatory Guide 1.191 (May 2001) "Fire Protection Program for Nuclear Power Plants during Decommissioning and Permanent Shutdown" is used as guidance to implement this NRC Regulation. The Fire Protection Program requirements apply to SSCs required to prevent fires, rapidly detect, control, and extinguish fires that do occur and could result in a radiological hazard and, minimize the risk the public, environment, and plant personnel resulting from fires that could result in a release of radioactive materials. Those fire protection systems/components required to protect safety related and important to safety SSCs are designated as Quality Class III-FPS per an engineering Q-List.

Appendix D: List of Acronyms

ANSI	American National Standards Institute
ASME	American Society of Mechanical Engineers
C of C	Certificate of Compliance
DMC	Document Management Center
DQAP	Decommissioning Quality Assurance Program
IMR	Independent Management Review
ISFSI	Independent Spent Fuel Storage Installation
ISR	Independent Safety Reviewer
M&TE	Measuring & Test Equipment
NDE	Non-Destructive Examination
NRC	Nuclear Regulatory Commission
QA	Quality Assurance
RG	Regulatory Guide
SCE	Southern California Edison
SONGS	San Onofre Nuclear Generating Station
SSC	Systems, Structures and Components

Appendix E: References

Developmental References

1) ASME NQA-1-2008 / 2009 Addenda *Quality Assurance Requirements for Nuclear Facility Applications*.
2) NUREG 1757, *Consolidated Decommissioning Guidance*; Volume 1 – Revision 2, *Decommissioning Process for Material Licenses.*

Appendix F: Definitions

Basic component:
When applied to nuclear power reactors, any plant structure, system, component, or part thereof necessary to assure:
(i) The integrity of the reactor coolant pressure boundary,
(ii) The capability to shut down the reactor and maintain it in a safe shutdown condition, or
(iii) The capability to prevent or mitigate the consequences of accidents which could result in potential offsite exposures comparable to those referred to in § 50.34(a) (1), § 50.67(b) (2), or § 100.11 of 10 CR 50, as applicable.

Certificate holder (10CFR71):
A person who has been issued a certificate of compliance or other package approval by the NRC.

Certificate holder (10CFR72):
A person who has been issued a Certificate of Compliance by the Commission for a spent fuel storage cask design.

Certificate of Compliance or C of C (10CFR71):
The certificate issued by the NRC under subpart D of 10 CFR 71, which approves the design of a package for the transportation of radioactive material.

Certificate of Compliance or CoC (10CFR72):
The certificate issued by the Commission that approves the design of a spent fuel storage cask in accordance with the provisions of subpart L of 10CFR72.

Decommission:
To remove a facility or site safely from service and reduce residual radioactivity to a level that permits:

(1) Release of the property for unrestricted use and termination of the license; or
(2) Release of the property under restricted conditions and termination of the license.

Design bases (10CFR50):
Design bases means that information which identifies the specific functions to be performed by a structure, system, or component of a facility, and the specific values or ranges of values chosen for controlling parameters as reference bounds for design. These values may be (1) restraints derived from generally accepted "state of the art" practices for achieving functional goals, or (2) requirements derived from analysis (based on calculation and/or experiments) of the effects of a postulated accident for which a structure, system, or component must meet its functional goals.

Design bases (10CFR71):
Information which identifies the specific functions to be performed by a structure, system, or component of a facility, and the specific values or ranges of values chosen for controlling parameters as reference bounds for design. These values may be restraints derived from generally accepted "state of the art" practices for achieving functional goals, or requirements derived from analysis (based on calculation and/or experiments) of the effects of a postulated accident for which a structure, system, or component must meet its functional goals.

Design bases (10CCR72):
Information that identifies the specific functions to be performed by a structure, system, or component of a facility or of a spent fuel storage cask and the specific values or ranges of values chosen for controlling parameters as reference bounds for design. These values may be restraints derived from generally accepted state-of-the-art practices for achieving functional goals or requirements derived from analysis (based on calculation or experiments) of the effects of a postulated event under which a structure,

system, or component must meet its functional goals. The values for controlling parameters for external events include:
(1) Estimates of severe natural events to be used for deriving design bases that will be based on consideration of historical data on the associated parameters, physical data, or analysis of upper limits of the physical processes involved; and
(2) Estimates of severe external man-induced events to be used for deriving design bases that will be based on analysis of human activity in the region, taking into account the site characteristics and the risks associated with the event.

Deviation:
A departure from the technical or quality assurance requirements defined in procurement documents, safety analysis report, construction permit, or other documents provided for basic components installed in a facility subject to the regulations of this part.

Greater than Class C waste or GTCC waste:
Low-level radioactive waste that exceeds the concentration limits of radionuclides established for Class C waste in 10 CFR 61.55.

Important to Safety
SSCs which are designed, fabricated, erected and tested to quality standards commensurate with the importance of the safety functions to be performed. Important to Safety SSC's include the following categories:

- Safety Related –
  Safety-related SSCs, as applicable to SONGS, means those structures, systems and components that are relied upon to remain functional during and following design basis events to assure the capability to prevent or mitigate the consequences of accidents which could result in potential offsite exposures comparable to the applicable guideline exposures set forth in 10 CFR 100.11.

- Non-Safety Related, Augmented Quality
  SSCs which are classified Non Safety-Related - Augmented Quality do not meet the definition of "Safety-Related" but are subject to select quality assurance requirements of 10 CFR 50, Appendix B in a graded approach.

Important to Safety – ISFSI: systems, structures, component conditions/functions, or activities required to store spent nuclear fuel safely.

Independent spent fuel storage installation or ISFSI:
A complex designed and constructed for the interim storage of spent nuclear fuel, solid reactor-related GTCC waste, and other radioactive materials associated with spent fuel and reactor-related GTCC waste storage. An ISFSI which is located on the site of another facility licensed under this part or a facility licensed under part 50 of this chapter and which shares common utilities and services with that facility or is physically connected with that other facility may still be considered independent.

Package:
The packaging together with its radioactive contents as presented for transport.

Packaging:
The assembly of components necessary to ensure compliance with the packaging requirements 10 CFR 71. It may consist of one or more receptacles, absorbent materials, spacing structures, thermal insulation, radiation shielding, and devices for cooling or absorbing mechanical shocks. The vehicle, tie down system, and auxiliary equipment may be designated as part of the packaging.

Permanent cessation of operation(s):
A certification by a licensee to the NRC that it has permanently ceased or will permanently cease reactor operation(s), or a final legally effective order to permanently cease operation(s) has come into effect.

Procurement document:
A contract that defines the requirements which facilities or basic components must meet in order to be considered acceptable by the purchaser.

Quality Affecting:
Activities that are performed in a SONGS program utilizing SONGS implementing procedures that are required by the DQAP. These activities shall be conducted under the SONGS QA program outlined in the DQAP and are subject to Nuclear Oversight audit and surveillance. These quality work items including but are not limited to following functions: designing, purchasing, constructing, fabricating, handling, shipping, storing, cleaning, preserving, erecting, installing, inspecting, testing, operating, maintaining, repairing, or modifying. Applicable SCCs are defined within the SONGS Q-Lists.

Spent fuel storage cask or cask:
All the components and systems associated with the container in which spent fuel or other radioactive materials associated with spent fuel are stored in an ISFSI.

Spent nuclear fuel or Spent fuel:
Fuel that has been withdrawn from a nuclear reactor following irradiation, has undergone at least 1 year's decay since being used as a source of energy in a power reactor, and has not been chemically separated into its constituent elements by reprocessing.

Structures, systems, and components important to safety (10CFR72):
Those features of the ISFSI, and spent fuel storage cask whose functions are:
(1) to maintain the conditions required to store spent fuel, high-level radioactive waste, or reactor related GTCC waste safely;
(2) To prevent damage to the spent fuel, the high-level radioactive waste, or reactor-related GTCC waste container during handling and storage; or
(3) To provide reasonable assurance that spent fuel, high-level radioactive waste, or reactor-related GTCC waste can be received, handled, packaged, stored, and retrieved without undue risk to the health and safety of the public.

Appendix G: Administrative Controls

INDEPENDENT REVIEWS

Nuclear Oversight Board (NOB)

The NOB serves the Chief Nuclear Officer (CNO) with an independent overview of selected SONGS decommissioning activities, placing particular emphasis on those activities which affect the safe decommissioning of the facility and changes to the SONGS ISFSI, including the protection of the public and the environment. The Nuclear Oversight Board (NOB) functions in an advisory capacity. Details regarding the membership and qualifications, schedule of meetings, scope and authority are contained in implementing procedures.

Onsite Review Committee (OSRC)

The OSRC ensures implementation of the requirements of the Unit 1 Technical Specification Section D.6.6.1 and serves the CNO with onsite review of the Unit 2 & 3 decommissioning activities and ISFSI operation as necessary on matters of Nuclear Safety. OSRC details regarding the membership, quorum, agenda and schedule of meetings are contained in implementing procedures.

Appendix H: DQAP Implementing Programs/Procedures

DQAP Section	QA Criterion Title	Implementing Programs and Procedures	
1.0	Organization	SO123-VII-20	Radiation Protection Program
		SO123-XII-1.3	Authorities and Duties of Nuclear Oversight Personnel
		SO123-XII-18.17	Nuclear Oversight Board Functions and Responsibilities
		SO123-VIII-ADMIN-1	Emergency Preparedness Program Maintenance
		SO123-VIII-ADMIN-2	Emergency Preparedness Program Training
		SO123-VIII-ADMIN-3	Emergency Preparedness Program Drill Development and Evaluation
		SO123-VIII-ADMIN-4	10CF50.54 (q) Screening and Evaluations
		SO123-VIII-ERO-1	PDEP Standards and Expectations
		SO123-VIII-ERO-2	Shift Manager / Emergency Director Checklist
		SO123-VIII-ERO-5	Radiation Protection Coordinator Checklist
		SO123-VIII-ERO-6	Dose Assessment
		SO123-FP-1	Fire Protection Program
		SO123-MA-1	Maintenance Division
		SO123-CH-1	Chemistry Program
		SO123-X-1.7	Special Nuclear Material Accountability (Physical Inventory)
		SO123-XV-60.1	Onsite Review Committee (OSRC)
		SO123-SE-1	Security
		SO123-XII-2.3	Stop Work Procedure
2.0	Quality Assurance Program	SO123-XV-SA-1	Self-Assessment Process
		SO123-ODCM	SONGS Offsite Dose Calculation Manual
		SO123-XII-1.3	Authorities and Duties of Nuclear Oversight Personnel
		SO123-XV-33	Personnel Qualification Program for the San Onofre Organization
		SO123-XV-5.3	Maintenance Rule Program
		SO123-HK-1	Site Housekeeping and Cleanness Control Program
		SO123-RM-1	Radiological Environmental Monitoring Program
		SO23-XXI-TRN	Conduct of Training
		SO123-XII-2.26	Changing the DQAP and UFSAR Chapter 17
3.0	Design Control	SO123-XXIV-10.1	Engineering Design Change Process - NECPS
		SO123-CC-2	Configuration Management Program
		SO123-XV-44	10 CFR 50.59 and 72.48 Program
4.0	Procurement Document Control	SO123-XXXII-2.1	Procurement Technical Document Control

5. 0	Instructions, Procedures and Drawings	SO123-XV-109	Procedure and Instruction Format and Content
		SO123-XV-HU-3	Human Performance Program
6.0	Document Control	SO123-VI-29	Corporate Documentation Management (CDM-SONGS) Record Process Management
		SO123-XII-5.6	Review/Approval of Procedures and Instructions
7.0	Control of Purchased Material, Equipment and Services	SO123-MS-1	Material Support Program
		SO123-XII-18.19	Supplier Audits
		SO123-XII-20.4	Receiving Inspection
		SO123-XV-93	Contractor Controls
		SO123-XII-7.12	Source Verification or surveillance Activities
8.0	Identification and Control of Material, Parts and Components	SO123-XI-3.2	Storage of Quality-Affecting Items
9.0	Control of Special Processes	SO123-XII-18.19	Supplier Audits
		SO123-MA-1	Maintenance Division
10.0	Control of Inspection	SO123-MA-1	Maintenance Division
		SO123-XII-10.22	Nuclear Oversight Planning and Inspection
11.0	Test Control	SO23-XX-37	Work Management Process
		SO123-TS-1	Technical Specification/LCS Administrative Controls (Section 5) Program
		SO123-TS-2	Technical Specification Licensee Controlled Specification Surveillance Requirements
12.0	Control of Measuring and Test Equipment	SO123-CL-1	Calibration Program
		SO123-VII-20	Radiation Protection Program
		SO123-MT-1	Measuring And Test Equipment Program
13.0	Handling, Storage and Shipping	SO123-XI-3.2	Storage of Quality-Affecting Items
14.0	Inspection, Test and Operating Status	SO123-XII-20.4	Receiving Inspection
		SO123-XX-5	Work Authorization and Tagging
15.0	Nonconforming Materials, Parts and Components	SO123-XV-50	Corrective Action Program
		SO123-XXXII-2.1	Procurement Technical Document Control
16.0	Corrective Action	SO123-XV-50	Corrective Action Program
17.0	Quality Assurance Records	SO123-VI-29	Corporate Documentation Management (CDM-SONGS) Record Process Management
		SO123-XV-77.1	Enterprise IT Software Quality Assurance and System Controls for SONGS
18.0	Audits	SO123-XII-18.1	Audit Program
		SO123-XII-1.3	Authorities And Duties of Nuclear Oversight Personnel

Attachment 2

Summary of Changes in the Decommissioning Quality Assurance Program, Revisions 4 and 5

Summary of Changes to the Decommissioning Quality Assurance Program (DQAP)
Revisions 4 & 5

DQAP section	Change(s)	Basis/Justification	Reduction? Y/N
UFSAR Chapter 17, Quality Assurance Program, was replaced by the Decommissioning Quality Assurance Plan (DQAP) on August 10, 2015 when SONGS received approval by the NRC. The biennial submittal of the DQAP was provided to the NRC in August of 2017. This document represents the changes since the last biennial submittal in 2017.			
Revision 4 – Organizational changes			
1.0 Organization p. 6	Changed reporting structure for CNO	Administrative changes to reflect organizational changes due to current state of decommissioning organization. All previously accepted commitments / responsibilities retained.	N
1.0 Organization – Station Management: p. 7	Changed reporting structure and division of responsibilities for Manager responsible for Engineering. ISFSI engineering will be responsible for QA program implementation for systems engineering, engineering programs, design and nuclear fuel management. Engineering Oversight will have design authority.	Administrative changes to reflect organizational changes due to current state of decommissioning organization. All previously accepted commitments / responsibilities retained.	N
1.0 Organization Station Management: p. 7	Changed reporting structure for Manager responsible for Radiation Protection who now reports through the Manager responsible for Decommissioning	Administrative changes to reflect organizational changes due to current state of decommissioning organization. All previously accepted commitments / responsibilities retained.	N

Summary of Changes to the Decommissioning Quality Assurance Program (DQAP)
Revisions 4 & 5

1.0 Organization Station Management p. 7	Incorporated 'Emergency Preparedness' (relocated from page 8) and 'ensures all activities are consistent with QA program requirements.' into responsibilities for the Plant Manager	Editorial change to relocate appropriate responsibilities. All previously accepted commitments / responsibilities retained.	N
1.0 Organization Station Management: p. 8	Removed redundant information regarding the line organizations which report to the Plant Manager previously defined on page 7.	Administrative changes to remove redundant information regarding reporting of line organizations to the Plant manager. All previously accepted commitments / responsibilities retained.	N
15.0 Nonconforming Materials, Parts or Components and 16.0 Corrective Action p.26 & 27	Changed noun name - 'Action Request' to 'corrective action document'	Editorial change to replace noun name with more generic nomenclature for corrective action documents	N
Appendix A: Organization Chart: p. 29	Updated Organization Chart to reflect changes due to decommissioning restructuring	Administrative changes to reflect organizational changes due to current state of decommissioning organization. All previously accepted commitments / responsibilities retained.	N
Appendix H: DQAP Implementing Programs/Procedures p. 39	Added Contractor Oversight procedure to DQAP Implementing Procedures list within 7.0, Control of Purchased Material, Equipment and Services	Administrative addition of Contractor Oversight procedure	N

Summary of Changes to the Decommissioning Quality Assurance Program (DQAP)
Revisions 4 & 5

Revision 5 – Administrative changes (organizational changes and Appendix H implementing procedure combining)			
1.0 Organization p. 6	Changed reporting structure for CNO to reflect SCE President who ultimately is responsible. Removed 'reports through the Senior Vice President Power Supply'	Simplifying the VP title has no impact on the DQAP since the CNO remains as the responsible individual for the implementation of the DQAP. Administrative changes to reflect organizational changes for alignment with the current state of the decommissioning organization. All previously accepted commitments / responsibilities retained.	N
p.7	Separated Decommissioning manager responsibilities into two: 'Decommissioning Projects' and 'Decommissioning Oversight' management. Added ISFSI Engineering to the Plant Manager reporting chain	Administrative changes to reflect an addition to executive management. ISFSI Engineering included within Plant Manager reporting chain. All previously accepted commitments / responsibilities retained.	
2.0 Quality Assurance program p.9	Added 10CFR71.106 to the paragraph which describes how changes to the DQAP will be implemented.	Administrative addition to align with the requirements contained in 10CFR71.106 for changes to the Quality Assurance Plan. All previously accepted commitments / responsibilities retained.	N
Appendix A: p. 29	Changed organizational chart to reflect the following: • addition of 'Decommissioning Projects' Director • Separated Corrective Action Program from Maintenance as a result of restructuring • Removed Work Control from title as program is controlled by Maintenance	Change to the organizational chart to add an additional layer of executive management. Administrative change to reflect organizational changes for alignment with the current state of the decommissioning organization. All previously accepted commitments / responsibilities retained.	N

Summary of Changes to the Decommissioning Quality Assurance Program (DQAP)
Revisions 4 & 5

Appendix H: DQAP Implementing Programs/Procedures: p. 38-39	Procedures have been combined or added. The following changes have been made to the implementing procedures listed in Appendix H*: • SO123-XI-8, "Supplier Evaluation and Qualification" was voided. Verification by Engineering and NO determined requirements retained within SO123-XII-18.19 and SO123-XXXII-2.1 to process voiding of XI-8. • SO123-VI-28 was combined and superseded with SO123-VI-29. • SO123-XV-77 and SO123-XV-77.1 both contain requirements for software QA documentation retention in eDMRM (records repository) and NIRMA commitment (NIRMA TG16-2011). SO123-XV-77.1 will be credited as the implementing procedure for software purchased or developed and used at SONGS.	Administrative changes due to the combining of procedures. These changes have been reviewed by Nuclear Oversight personnel as required by section 6.0 Document Control of the DQAP to ensure regulatory requirements have been retained. All previously accepted commitments / responsibilities retained.	N
	The following QA implementing procedures have been added: • Section 1 – SO123-XII-2.3, *Stop Work Procedure*	Review of revision 5 revealed four additional QA procedures should be listed in Appendix H. Procedural additions are considered administrative for alignment with DQAP. Procedure revisions were previously approved by NOD staff.	N

	• Section 2 – SO123-XII-2.26, *Changing the DQAP and UFSAR Chapter 17* • Section 6 – SO123-XII-5.6, *Review/Approval of Procedures and Instructions* • Section 7 – SO123-XII-7.12, *Source Verification or Surveillance Activities*	These additions are not considered reduction in commitment to the previously accepted QA plan. All previously accepted commitments / responsibilities retained.	