Nuclear Development
244 Chestnut Street, Salem, NJ 08079

PSEG
Power LLC

ND-2012-0032
May 22, 2012

10 CFR 52, Subpart A

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

Subject: **PSEG Power, LLC, Revision 1 to the Quality Assurance Program Description for the Early Site Permit Application for the PSEG Site Docket Number 52-043**

Reference: 1) Letter ND-2010-0073 from D. Lewis and P. Davison, PSEG to NRC, dated May 25, 2010

2) Letter ND-2010-0074 from D. Lewis and P. Davison, PSEG to NRC, dated May 25, 2010

In Reference 1, PSEG Power, LLC and PSEG Nuclear, LLC (together, "Applicants") submitted an application for an Early Site Permit in accordance with 10 CFR 52, Subpart A, Early Site Permits. In Reference 2, PSEG submitted the Quality Assurance Program Description (QAPD) for the Early Site Permit application (ESP) for a site near Salem, New Jersey (the ESP Site).

Revision 1 to the QAPD includes revised organization charts due to a change in the reporting relationship for the PSEG Nuclear Development Organization. Additionally, QAPD, Part II, Section 1, Organization, has been revised to reflect current organizational titles and responsibilities. Revised text is annotated by revision bars in the right-hand margin of the QAPD. This QAPD is applicable only to the nuclear development activities related to development of the ESP application for the ESP site, and does not impact the NRC approved Quality Assurance Topical Report for the existing operating units located at this site.

If any additional information is needed, please contact David Robillard, PSEG Nuclear Development Quality Assurance Specialist at (856) 339-7914.

Q004
D079
NRO

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 22st day of May, 2012.

Respectfully,

James Mallon
Early Site Permit Manager
Nuclear Development
PSEG Power, LLC

Paul J. Davison
Vice President, Operations Support
PSEG Nuclear, LLC

Enclosure 1: PSEG ESP Quality Assurance Program Description

cc: USNRC, Director, Office of New Reactors/DNRL (w/enclosures)
USNRC, Project Manager, Division of New Reactor Licensing, PSEG Site
USNRC Region I, Regional Administrator (w/enclosures)

PSEG Letter ND-2012-0032, dated May 22, 2012

ENCLOSURE 1

PSEG ESP Quality Assurance Program Description

April 2012

PSEG
Power LLC

Quality Assurance Program Description

Title: Nuclear Development Quality Assurance Program Description

Process/Program Owner: **Nuclear Development Early Site Permit Manager**

	Version Number	Effective Date
PSEG Power LLC Topical Report	**Revision 1**	**April 26, 2012**

Revision Summary

Revised Part II, Section 1, Organization, to more clearly delineate organizations responsible for implementing the Nuclear Development Quality Assurance Program.

Prepared By/Date:

David Robillard 3/22/12

David Robillard
Nuclear Development QA Specialist

Reviewed By/Date:

J Mallon 3/26/12

James Mallon
Nuclear Development
Early Site Permit Manager

Approved By/Date:

WLL for 4/25/12

William Levis
President/COO, PSEG Power LLC

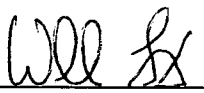
PSEG Power LLC

POLICY STATEMENT

PSEG Power LLC (PSEG) shall design, procure and construct and operate the nuclear plants in a manner that will ensure the health and safety of the public and workers. These activities shall be performed in compliance with the requirements of the Code of Federal Regulations (CFR), the applicable Nuclear Regulatory Commission (NRC) Facility Operating Licenses, and applicable laws and regulations of the state and local governments.

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

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

Signed 

William Levis
President/Chief Operating Officer
PSEG Power LLC

Date 4/25/12

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PART I INTRODUCTION

SECTION 1 GENERAL

PSEG Power LLC's (PSEG) Nuclear Development Quality Assurance Program Description (QAPD) is the top-level policy document that establishes the quality assurance policy and assigns major functional responsibilities for early site permit (ESP) activities conducted by or for PSEG. The QAPD describes the methods and establishes quality assurance (QA) and administrative control requirements that meet 10 CFR 50, Appendix B and 10 CFR 52. The QAPD is based on the requirements and recommendations of ASME NQA-1-1994, "Quality Assurance Requirements for Nuclear Facility Applications," Parts I, II, and III, as specified in this document.

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

1.1 Scope/Applicability

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

Designing	Handling	Siting	Storing	Shipping
Procuring	Testing	Inspecting	Training	

Safety-related SSC's, under the control of the QAPD, are identified by design documents. The technical aspects of these items are considered when determining program applicability, including, as appropriate, the item's design safety function. The QAPD may be applied to certain activities where regulations other than 10 CFR 50 and 10 CFR 52 establish QA requirements for activities within their scope.

The policy of PSEG is to assure a high degree of availability and reliability of its nuclear plants while ensuring the health and safety of its workers and the public. To this end, selected elements of the QAPD are also applied to certain equipment and activities that are not safety-related, but support safe, economic, and reliable plant operations, or where other NRC guidance establishes quality assurance requirements. Implementing documents establish program element applicability.

The definitions provided in ASME NQA-1-1994, Part 1, Section 1.4 apply to select terms as used in this document.

PART II QAPD DETAILS

SECTION 1 ORGANIZATION

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

The Nuclear Development Early Site Permit Manager is responsible to size the Quality Assurance staff commensurate with the duties and responsibilities assigned.

The PSEG Nuclear Development (ND) organization is responsible for the new nuclear plant licensing, engineering, procurement, construction, startup and operations development activities. Several organizations within PSEG implement and support the QAPD. These organizations include, but are not limited to Nuclear Development, Operations Support, Internal Services and Nuclear Oversight.

Design, engineering and environmental services are provided to the PSEG Nuclear Development organization by Sargent & Lundy, LLC.

The following sections describe the reporting relationships, functional responsibilities and authorities for organizations implementing and supporting the Nuclear Development QA Program. The PSEG organization and the Nuclear Development organization are shown in Figures II.1-1 and II.1-2 respectively.

1.1 President and COO – PSEG Power, LLC

The President/COO of PSEG Power, LLC is responsible for all aspects of design, construction and operation of PSEG's nuclear plants. The President/COO is also responsible for all technical and administrative support activities provided by PSEG and contractors. The President/COO directs the Chief Nuclear Officer (CNO) – PSEG Nuclear and the Nuclear Development Project Director in fulfillment of their responsibilities. The President/COO reports to the PSEG Board of Directors with respect to all matters.

1.2 President and CNO – PSEG Nuclear

The President and CNO of PSEG Nuclear reports to the President/COO and is responsible for all PSEG Nuclear functions supporting the Early Site Permit application.

1.3 Director, Regulatory Affairs

The PSEG Nuclear Director, Regulatory Affairs reports to the President and CNO of PSEG Nuclear and is responsible for existing operating nuclear plant licensing and new nuclear plant licensing activities.

1.4 Director, Nuclear Oversight

The PSEG Nuclear Director, Nuclear Oversight (NOS) reports to the President and CNO of PSEG Nuclear and is responsible for providing audits and assessments of the implementation of the ND QA Program.

1.5 Nuclear Development

PSEG Nuclear Development (ND) organization is responsible for new nuclear plant licensing, engineering, and procurement activities.

1.5.1 Nuclear Development Early Site Permit Manager

The Nuclear Development Early Site Permit Manager (NDESPM) reports to the Director, Regulatory Affairs and is responsible for the administration of the Nuclear Development QAPD. The NDESPM also directs the planning and development of the Nuclear Development staff and organization resources. The NDESPM is also responsible for establishing and managing the Architect/Engineer contract for the development of new nuclear generation.

1.5.2 Quality Assurance

The PSEG Nuclear Development Quality Assurance (QA) Organization is responsible for independently planning and performing activities to verify the development and effective implementation of the PSEG Nuclear Development QAPD, including but not limited to Nuclear Development engineering, licensing, document control, corrective action program and procurement that support new nuclear plant generation.

1.5.2.1 Quality Assurance Specialist

The QA Specialist reports to the NDESPM and is responsible for the development of the QAPD, evaluating compliance with the QAPD programs, and verification of implementation of the QAP described in this document. The QA Specialist is responsible for assuring compliance with regulatory requirements and procedures through audits and technical reviews; for monitoring organization processes to ensure conformance to commitments and licensing document requirements; for ensuring that vendors providing quality services, parts and materials to PSEG are meeting the requirements of 10 CFR 50 Appendix B through NUPIC or PSEG vendor audits. The QA Specialist has sufficient independence from other Nuclear Development priorities to bring forward issues affecting safety and quality and makes judgments regarding quality in all areas necessary regarding PSEG's Nuclear Development activities. The QA Specialist may make recommendations to the Nuclear Development management regarding improving the quality of work processes. If the QA Specialist disagrees with any actions taken by the Nuclear Development organization and is unable to obtain resolution, the QA Specialist shall inform the President/COO who will determine the final disposition.

1.6 Operations Support

The Operations Support organization is responsible for support of the Nuclear Development organization by providing engineering and project management support where applicable.

1.6.1 Senior Vice President – Nuclear Operations

The Senior Vice President - Nuclear Operations reports to the PSEG Nuclear President and CNO

and is responsible for the administration of the corporate engineering and nuclear fuel functions for the existing plants and may provide support activities for Nuclear Development under the QAPD.

1.7 PSEG Services

The PSEG Services organization is responsible for supporting the Nuclear Development organization through performing activities related to procurement, safety and health and information technology where applicable.

1.7.1 Executive Vice President and Chief Financial Officer - PSEG Services

The Public Service Enterprise Group Executive Vice President and Chief Financial Officer is responsible for managing the overall PSEG Internal Services Corporation organization, including assuring that Supply Chain Management and Information Technology support Nuclear Development activities in accordance with the QAPD.

1.8 Architect/Engineer

Sargent & Lundy, LLC provides engineering services for the development of the ESP application. These engineering services include site-specific license, engineering and design activities necessary to support development of the ESP application and planning and support of preconstruction and construction activities.

1.9 Authority to Stop Work

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

1.10 Quality Assurance Organizational Independence

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

1.11 NQA-1-1994 Commitment

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

Figure II.1-1

PSEG Power, LLC Organization

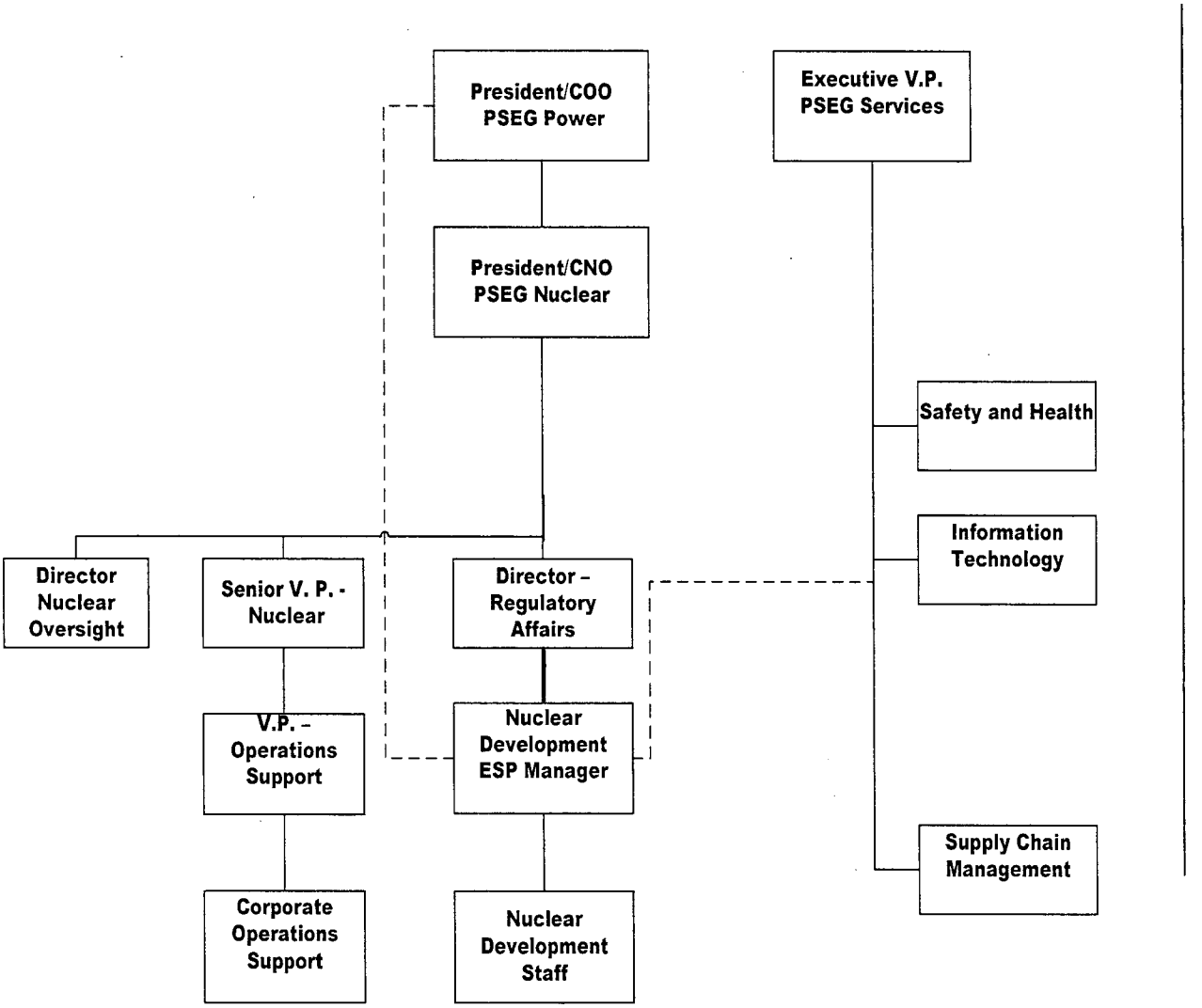
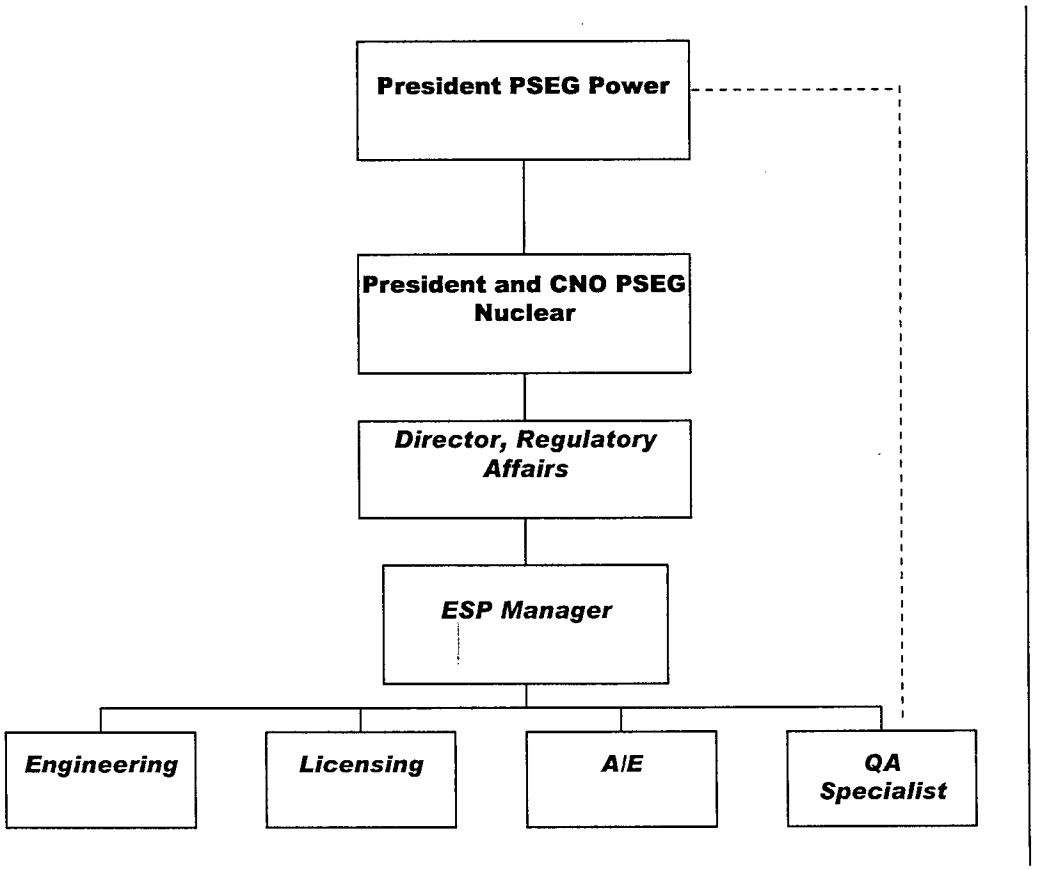


Figure II.1-2

PSEG Power, LLC
Nuclear Development Organization



SECTION 2 QUALITY ASSURANCE PROGRAM

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

The objective of the QAP is to assure that PSEG's nuclear generating plants are designed in accordance with governing regulations and license requirements. The program is based on the requirements of ASME NQA-1-1994, "Quality Assurance Requirements for Nuclear Facility Applications," as further described in this document. The QAP applies to those quality-related activities that involve the functions of safety-related structures, systems, and components (SSCs) associated with the design (excluding Design Certification activities) of the facility. Examples of ESP safety-related activities include, but are not limited to, site-specific engineering related to safety-related SSCs, site geotechnical investigations, site engineering analysis, seismic analysis, and meteorological analysis. A list of systems that identifies SSCs and activities to which this program applies is maintained at the appropriate facility. Cost and scheduling functions do not prevent proper implementation of the QAP.

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

For the ESP application, the QAPD applies to those Nuclear Development and PSEG activities that can affect either directly or indirectly the safety-related site characteristics or analysis of those characteristics. In addition, the QAPD applies to engineering activities that are used to characterize the site or analyze that characterization.

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

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

2.1 Responsibilities

Personnel who work directly or indirectly for PSEG are responsible for achieving acceptable quality in the work covered by this QAPD. This includes those activities delineated in Part I,

Section 1.1. PSEG personnel performing verification activities are responsible for verifying the achievement of acceptable quality. Activities governed by the QAPD are performed as directed by documented instructions, procedures and drawings that are of a detail appropriate for the activity's complexity and effect on safety. Instructions, procedures and drawings specify quantitative or qualitative acceptance criteria as applicable or appropriate for the activity, and verification is against these criteria. Provisions are established to designate or identify the proper documents to be used in an activity, and to ascertain that such documents are being used. The QA Specialist is responsible to verify that processes and procedures comply with the QAPD and other applicable requirements, that such processes or procedures are implemented, and that management appropriately ensures compliance. PSEG Nuclear – Nuclear Oversight performs audits of vendors and internal audits of the Nuclear Development QA Program implementation.

2.2 Delegation of Work

PSEG retains and exercises the responsibility for the scope and implementation of an effective QAP. Positions identified in Part II, Section 1, may delegate all or part of the activities of planning, establishing, and implementing the program for which they are responsible to others, but retain the responsibility for the program's effectiveness. Decisions affecting safety are made at the level appropriate for its nature and effect, and with any necessary technical advice or review.

2.3 Site-specific Safety-Related Design Basis Activities

Site-specific safety-related design basis activities are defined as those activities, including sampling, testing, data collection, and supporting engineering calculations and reports, that will be used to determine the bounding physical parameters of the site. Appropriate quality assurance measures are applied.

2.4 Periodic Review of the Quality Assurance Program

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

2.5 Issuance and Revision to Quality Assurance Program

Administrative control of the QAPD will be in accordance with 10 CFR 50.55(f). Changes to the QAPD are evaluated by the QA Specialist to ensure that such changes do not degrade previously approved quality assurance controls specified in the QAPD. This document shall be revised as appropriate to incorporate additional QA commitments that may be established during the ESP application development process. New revisions to the document will be reviewed, at a minimum, by the Quality Assurance Specialist and approved by the PSEG Power President/COO.

2.6 Personnel Qualifications

Personnel assigned to implement elements of the QAPD shall be capable of performing their assigned tasks. To this end, PSEG establishes and maintains formal indoctrination and training programs for personnel performing, verifying, or managing activities within the scope of the QAPD to assure that suitable proficiency is achieved and maintained. Sufficient managerial depth is provided to cover absences of incumbents. When required by code, regulation, or standard,

specific qualification and selection of personnel is conducted in accordance with those requirements as established in the applicable PSEG procedures. Indoctrination includes the administrative and technical objectives, requirements of the applicable codes and standards, and the QAPD elements to be employed. Records of personnel training and qualification are maintained.

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

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

2.7 NQA-1-1994 Commitment / Exceptions

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

- NQA-1-1994, Supplement 2S-1
  - Supplement 2S-1 will include use of the guidance provided in Appendix 2A-1 the same as if it were part of the Supplement. The following two alternatives may be applied to the implementation of this Supplement and Appendix:
    - (1) In lieu of being certified as Level I, II, or III in accordance with NQA-1-1994, personnel performing independent quality verification inspections, examinations, measurements, or tests of material, products, or activities will be required to possess qualifications equal to or better than those required for performing the task being verified; and the verification is within the skills of these personnel and/or is addressed by procedures. These individuals will not be responsible for the planning of quality verification inspections and tests (i.e., establishing hold points and acceptance criteria in procedures, and determining who will be responsible for performing the inspections), evaluating inspection training programs, nor certifying inspection personnel.
    - (2) A qualified engineer may be used to plan inspections, evaluate the capabilities of an inspector, or evaluate the training program for

inspectors. For the purpose of these functions, a qualified engineer is one who has a baccalaureate in engineering in a discipline related to the inspection activity (such as electrical, mechanical, civil) and has a minimum of five years engineering work experience with at least two years of this experience related to nuclear facilities.

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

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

SECTION 3 DESIGN CONTROL

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

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

3.1 Design Verification

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

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

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

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

3.2 Design Records

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

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

3.3 Computer Application and Digital Equipment Software

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

3.4 Setpoint Control

This does not apply to an ESP-only QAP

3.5 NQA-1-1994 Commitment

In establishing its program for design control and verification, PSEG commits to compliance with NQA-1-1994, Basic Requirement 3, and Supplement 3S-1, the subsurface investigation requirements in Subpart 2.20 and the standards for computer software in Subpart 2.7.

SECTION 4 PROCUREMENT DOCUMENT CONTROL

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

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

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

Reviews of procurement documents shall be performed by personnel who have access to pertinent information and who have an adequate understanding of the requirements and intent of the procurement documents. For the Early Site Permit project, PSEG Nuclear Development processes procurement documents under the PSEG Nuclear procurement process.

4.1 NQA-1-1994 Commitment / Exceptions

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

- NQA-1-1994, Supplement 4S-1

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

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

  - Section 3 of Supplement 4S-1 requires procurement documents to be reviewed prior to bid or award of contract. The quality assurance review of

procurement documents is satisfied through review of the applicable procurement specification, including the technical and quality procurement requirements, prior to bid or award of contract. Procurement document changes (e.g., scope, technical or quality requirements) will also receive the quality assurance review.

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

SECTION 5 INSTRUCTIONS, PROCEDURES, AND DRAWINGS

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

5.1 Procedure Adherence

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

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

5.2 Procedure Content

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

5.3 NQA-1-1994 Commitment

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

SECTION 6 DOCUMENT CONTROL

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

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

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

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

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

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

(f) coordinating and controlling interface documents and procedures.

The types of documents to be controlled include:

(a) design drawings;

(b) engineering calculations;

(c) design specifications;

(d) purchase orders and related documents;

(e) vendor-supplied documents;

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

(g) inspection and test reports;

(h) instructions and procedures for activities covered by this QAPD including design and calibration; and

(j) nonconformance reports and corrective action reports

6.1 Review and Approval of Documents

Documents are reviewed for adequacy by qualified persons other than the preparer. During the ESP phase, procedures for design, construction and installation are also reviewed by the Quality Assurance Specialist to ensure quality assurance measures have been appropriately applied. The documented review signifies concurrence.

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

6.2 Changes to Documents

Changes to documents, other than those defined in implementing procedures as minor changes, are reviewed and approved by the same organizations that performed the original review and

approval unless other organizations are specifically designated. The reviewing organization has access to pertinent background data or information upon which to base their approval. Minor changes to documents, such as inconsequential editorial corrections, do not require that the revised documents receive the same review and approval as the original documents. To avoid a possible omission of a required review, the type of minor changes that do not require such a review and approval and the persons who can authorize such a classification shall be clearly delineated in implementing procedures.

6.3 NQA-1-1994 Commitment

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

SECTION 7 CONTROL OF PURCHASED MATERIAL, EQUIPMENT, AND SERVICES

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

7.1 Acceptance of Item or Service

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

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

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

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

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

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

- If there is insufficient evidence of implementation of a QA program, the initial evaluation is of the existence of a QA program addressing the scope of services to be provided. The initial audit is performed after the supplier has completed sufficient work to demonstrate that its organization is implementing a QA program.

7.2 NQA-1-1994 Commitment / Exceptions

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

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

  - PSEG considers that other 10 CFR 50 licensees, Authorized Nuclear Inspection Agencies, National Institute of Standards and Technology, or other State and Federal agencies which may provide items or services to PSEG plants are not required to be evaluated or audited.

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

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

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

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

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

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

      - American Association for Laboratory Accreditation (A2LA);

      - ACLASS Accreditation Services (ACLASS);

- International Accreditation Services (IAS);
- Laboratory Accreditation Bureau (L-A-B);
- Other NRC-approved laboratory accrediting body.

- The accreditation encompasses ANS/ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories."
- The published scope of accreditation for the calibration laboratory covers the necessary measurement parameters, range, and uncertainties.

- For Section 8.1, PSEG considers documents that may be stored in approved electronic media under PSEG or vendor control, not physically located on the plant site, but are accessible from the respective nuclear facility site as meeting the NQA-1 requirement for documents to be available at the site. Following completion of the construction period, sufficient as-built documentation will be turned over to PSEG to support operations. The PSEG records management system will provide for timely retrieval of necessary records.

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

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

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

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

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

8.1 NQA-1-1994 Commitment

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

SECTION 9 CONTROL OF SPECIAL PROCESSES

This does not apply to an ESP-only QAP.

SECTION 10 INSPECTION

PSEG has established the necessary measures and governing procedures to implement inspections that assure items, services, and activities affecting safety meet established requirements and conform to applicable documented specifications, instructions, procedures, and design documents. Inspection may also be applied to items, services, and activities affecting plant reliability and integrity. Types of inspections may include those verifications related to procurement, such as source, in-process, and final inspection activities. Inspections are carried out by properly qualified persons independent of those who performed or directly supervised the work. Inspection results are documented. Inspection activities associated with the development of the Early Site Permit application have been delegated to the Architect Engineer contracted to prepare the Early Site Permit application.

10.1 Inspection Program

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

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

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

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

10.2 Inspector Qualification

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

10.3 NQA-1-1994 Commitment / Exceptions

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

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

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

SECTION 11 TEST CONTROL

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

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

11.1 NQA-1-1994 Commitment

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

11.2 NQA-1-1994 Commitment for Computer Program Testing

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

SECTION 12 CONTROL OF MEASURING AND TEST EQUIPMENT

PSEG has established the necessary measures and governing procedures to control the calibration, maintenance, and use of measuring and test equipment (M&TE) that provides information important to safe plant operation. The provisions of such procedures cover equipment such as indicating and actuating instruments and gages, tools, reference and transfer standards, and nondestructive examination equipment. The suppliers of commercial-grade calibration services are controlled as described in Part II, Section 7. Control of measuring and test equipment activities associated with the development of the Early Site Permit application have been delegated to the Architect Engineer contracted to prepare the Early Site Permit application.

12.1 Installed Instrument and Control Devices

This does not apply to an ESP-only QAP.

12.2 NQA-1-1994 Commitment / Exceptions

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

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

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

SECTION 13 HANDLING, STORAGE, AND SHIPPING

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

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

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

Operators of special handling and lifting equipment shall be experienced or trained in the use the equipment. Where required, PSEG complies with applicable hoisting, rigging and transportation regulations and codes.

13.1 Housekeeping

This does not apply to an ESP-only QAP

13.2 NQA-1-1994 Commitment / Exceptions

In establishing provisions for handling, storage and shipping, PSEG commits to compliance with NQA-1-1994, Basic Requirement 13 and Supplement 13S-1.

SECTION 14 INSPECTION, TEST, AND OPERATING STATUS

This does not apply to an ESP-only QAP.

SECTION 15 NONCONFORMING MATERIALS, PARTS, OR COMPONENTS

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

15.1 Interface with the Reporting Program

PSEG has appropriate interfaces between the QAP for identification and control of nonconforming materials, parts, or components and the non-QA Reporting Program to satisfy the requirements of 10 CFR 52, 10 CFR 50.55 and/or 10 CFR 21 during ESP design.

15.2 NQA-1-1994 Commitment

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

SECTION 16 CORRECTIVE ACTION

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

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

16.1 Interface with the Reporting Program

PSEG has appropriate interfaces between the QAP for corrective actions and the non-QA Reporting Program to satisfy the requirements of 10 CFR 52, 10 CFR 50.55 and/or 10 CFR 21 during ESP activities.

16.2 NQA-1-1994 Commitment

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

SECTION 17 QUALITY ASSURANCE RECORDS

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

17.1 Record Retention

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

17.2 Electronic Records

When using electronic records storage and retrieval systems, PSEG complies with NRC guidance Generic Letter 88-18, "Plant Record Storage on Optical Disks." PSEG will manage the storage of QA Records in electronic media consistent with the intent of RIS 2000-18 and associated NIRMA Guidelines TG11-1998, TG15-1998, TG16-1998, and TG21-1998.

17.3 NQA-1-1994 Commitment / Exceptions

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

- NQA-1-1994, Supplement 17S-1
  - Supplement 17S-1, Section 4.2(b) requires records to be firmly attached in binders or placed in folders or envelopes for storage in steel file cabinets or on shelving in containers. For hard-copy records maintained by PSEG, the records are suitably stored in steel file cabinets or on shelving in containers, except that methods other than binders, folders or envelopes may be used to organize the records for storage.

SECTION 18 AUDITS

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

18.1 Performance of Audits

Internal audits of selected aspects of licensing, design, construction phase and operating activities are performed with a frequency commensurate with safety significance and in a manner which assures that audits of safety-related activities are completed. During the early portions of Nuclear Development activities, audits will focus on areas including, but not limited to, site investigation, procurement, and corrective action. Functional areas of an organization's QA program for auditing include at a minimum verification of compliance and effectiveness of implementation of internal rules, procedures (e.g., design, procurement, and test), regulations, programs for corrective actions, and observation of performance of ESP activities, including associated record keeping.

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

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

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

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

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

18.2 Internal Audits

Internal audits of organization and facility activities, conducted prior to placing the facility in operation, should be performed in such a manner as to assure that an audit of all applicable QA program elements is completed for each functional area at least once each year or at least once during the life of the activity, whichever is shorter.

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

18.3 NQA-1-1994 Commitment

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

PART III NON–SAFETY RELATED SSC QUALITY CONTROLS

This does not apply to an ESP-only QAP.

PART IV REGULATORY COMMITMENTS

NRC Regulatory Guides and Quality Assurance Standards

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

Regulatory Guides:

See SSAR Chapter 1 for the PSEG evaluation of conformance with the guidance in NRC Regulatory Guides in effect six months prior to the submittal date of this ESP application.

Regulatory Guide 1.8, Rev.3, May 2000, Qualification and Training of Personnel for Nuclear Power Plants.

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

This does not apply to an ESP-only QAP.

Regulatory Guide 1.26, Revision 4, March 2007 - Quality Group Classifications and Standards for Water-, Steam-, and Radioactive-Waste-Containing Components of Nuclear Power Plants.

Regulatory Guide 1.26 defines classification of systems and components.

This Regulatory Guide is not applicable to an ESP-only QAPD submittal using a plant parameter envelope.

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

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

PSEG identifies conformance and exceptions for the applicable regulatory position guidance provided in this regulatory guide in SSAR Chapter 1, Table 1.9-1.

Regulatory Guide 1.29, Revision 4, March 2007 - Seismic Design Classification

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

PSEG identifies conformance and exceptions for the applicable regulatory position guidance provided in this regulatory guide in SSAR Chapter 2.

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

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

This does not apply to an ESP-only QAP.

Standards:

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

PSEG commits to NQA-1-1994, Parts I, II and III, as described in Part II of this document.

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

PSEG commits to NIRMA TGs as described in Part II, Section 17.

PART V ADDITIONAL QUALITY ASSURANCE AND ADMINISTRATIVE CONTROLS FOR THE PLANT OPERATIONAL PHASE

This does not apply to an ESP-only QAP.