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1.0 PURPOSE

- 1.1 The purpose of this chapter is to define criteria and establish administrative controls for implementation of the Quality Assurance (QA) Program for the South Texas Project Electric Generating Station (STPEGS).

2.0 SCOPE

- 2.1 The QA Program is implemented and controlled in accordance with the Operations Quality Assurance Plan (OQAP) and is applicable to structures, systems components, and activities to an extent consistent with their importance to safety, and complies with the requirements of 10CFR50, Appendix B and other program commitments as appropriate. The QA Program is implemented in a "graded" manner, and is comprised of two separate and distinct programs - "Full" and "Basic".

Graded Quality Assurance is one element of STP's Comprehensive Risk Management (CRM) Program. Graded Quality Assurance provides the process by which risk-based methodology [i.e., Probabilistic Safety Assessment (PSA)] and performance-based information analyses are combined to provide direction as to what levels of programmatic controls are needed for systems, components or activities, and as to the levels of first line and independent oversight needed to provide necessary assurance that items will operate safely and activities are accomplished as prescribed. The CRM Program is implemented by Working Groups who provide risk-informed, performance-based recommendations to an Expert Panel. The Expert Panel is a multi-discipline group comprised of high-level management representing Design and Systems Engineering, Nuclear Licensing, Industry Relations, Risk and Reliability Analysis, Director of Quality, and Unit #1 Plant Manager. The Expert Panel is charged with guiding the implementation of the CRM Program.

For items and activities determined to be safety significant/important, "Full" program controls are applied. For items and activities determined to be NOT risk significant/important, yet determined to be significant/important for other reasons, "Full" program controls will be applied in a selected manner, specifically "targeted" at those attributes of the item or activity which render it significant or important. For items and activities determined to be NOT

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significant/important, yet subject to the controls of 10CFR50, Appendix B, "Basic" program controls are applied. These two programs will be applied in three different manners (i.e., Full, Targeted, and Basic). "Full" and "Targeted" items and activities will be controlled in accordance with the applicable elements of the "Full" program. "Basic" items and activities will be controlled in accordance with the applicable elements of the "Basic" program.

NOTE: An analysis of items and activities to determine which level of program controls are appropriate must be completed prior to designation as "Targeted" or "Basic". Until these analyses are complete, "Full" program controls will be applied across the board.

- 2.2 The QA Program will also extend, as applicable, to programs including 10CFR71, Subpart H (except design and fabrication of NRC certified radioactive waste shipping casks); ASME Boiler and Pressure Vessel Code, Sections III and XI; and others as defined by STPEGS management in this OQAP or other program documents. Programs which may be included in the jurisdiction of the OQAP include the Fire Protection Program, Emergency Plan, Radiological Environmental Monitoring Program, Radwaste Management Program, Computer Program Verification and Control, Seismic and Environmental Equipment Qualification Programs, Radiation Protection Program, and Station Blackout (SBO) systems and equipment.

3.0 DEFINITIONS

- 3.1 Full program controls - The highest levels of program controls and oversight that are to be afforded to high safety/risk significant items and activities. These are in full compliance with the requirements of 10CFR50, Appendix B, and additionally represent compliance with the applicable STP UFSAR commitments relative to USNRC Regulatory Guides and ANSI Standards which they endorse. These controls provide the highest levels of program controls and line/independent oversight and are designed to provide a high degree of assurance that items perform safely and activities are accomplished as expected.

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- 3.2 Targeted program controls - A level of program controls and oversight applied to items and activities which, while not being "high" safety/risk significant, are nevertheless significant or important for other reasons. These controls are elements of the "Full" program which are specifically applied to those characteristics/attributes of items or activities which render them significant or important. These controls provide a high degree of assurance that the items will perform their specific significant function and the important elements of the activities are accomplished as expected.
- 3.3 Basic program controls - Program controls applied to items and activities which, while not being "high risk" or significant/important for other reasons, are nevertheless subject to the controls of 10CFR50 Appendix B. These controls are defined as good business practices which reflect the most economical and efficient means of conducting business and are designed to provide assurance that items perform, and activities are accomplished, as expected. They do not reflect the strict controls as depicted in USNRC Regulatory Guides and the ANSI standards they endorse.
- 4.0 REFERENCES
- 4.1 10CFR50, Appendix B
- 4.2 10CFR71, Subpart H
- 4.3 ASME B&PV Code
- 4.4 10CFR50.63, Loss of All Alternating Current Power
- 5.0 REQUIREMENTS
- 5.1 The OQAP consists of various documents which identify and provide the mechanism for verifying implementation of commitments, requirements, and actions necessary to attain quality assurance objectives.
- 5.2 The OQAP is prepared to implement the STPEGS QA Program.
- 5.2.1 The OQAP provides policies to be implemented for the STPEGS. The OQAP also assigns responsibilities necessary for the attainment of quality assurance objectives and the verification of conformance to established requirements.

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5.2.2 Attachment I provides a matrix of 10CFR50, Appendix B criteria to the OQAP chapters.

5.3 Establishing Policies and Goals

5.3.1 QA policies and goals for STPEGS are defined in the OQAP. The Group Vice President, Nuclear has overall responsibility for quality assurance.

5.3.2 The General Manager, Nuclear Assurance and Licensing (NA&L), is responsible for the development of the OQAP.

5.4 Organizational Independence

5.4.1 The reporting arrangement utilized by the NA&L Organization ensures that those personnel performing independent assessments have the organizational freedom to:

5.4.1.1 Identify quality problems.

5.4.1.2 Initiate, recommend, or provide solutions.

5.4.1.3 Verify implementation of solutions.

5.4.2 Personnel verifying compliance with quality requirements do not have direct responsibility for the performance of that work.

5.5 QA Program

5.5.1 The operations phase of the STPEGS includes testing, operation, maintenance, refueling, inservice inspection, and modification. The OQAP requires that HL&P, its contractors, subcontractors, and vendors comply with the criteria established by 10CFR50, Section 50.55a; 10CFR50, Appendix A, General Design Criterion (GDC) 1; 10CFR50, Appendix B, and 10CFR71, Sub-Part H.

It is the intent of HL&P to comply, as appropriate, with the applicable American National Standards Institute (ANSI) N45.2 daughter standards, ANSI N18.7, and implementing Regulatory Guides (RG) as defined

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herein and in Updated Final Safety Analysis Report (UFSAR) Table 3.12-1.

5.6 Delegation of QA Functions

- 5.6.1 The OQAP may be executed in whole or part by subcontract personnel. However, STPEGS will retain responsibility for the total quality assurance program, and NA&L personnel will perform appropriate assessment activities of subcontracted activities.
- 5.6.2 When first-level quality control inspection and NDE are performed by STPEGS personnel, they are qualified and certified in accordance with applicable codes, standards, procedures, and other regulations. Monitoring and surveillance of the quality control and NDE activities shall be performed by Operations QA personnel.

5.7 Identification of Safety Significant Systems, Components, and Activities

- 5.7.1 The program described herein is applied to activities affecting the safety functions of those structures, systems, and components which prevent, or mitigate the consequences of postulated accidents that could cause undue risk to the health and safety of the public. The structures, systems, and components controlled are listed in UFSAR Section 3.2, along with their associated fire protection systems. UFSAR Section 3.2 also identifies those structures, systems, and components which may not represent a safety significant concern but to which the STPEGS OQAP is applied.
- 5.7.2 The fire protection QA Program is part of the overall STPEGS Operations QA Program and is therefore under the management control of QA. Fire protection QA Program criteria are being implemented as part of the HL&P Operations QA Program, as defined in this OQAP.
- 5.7.3 Expendable or consumable items necessary for the functional performance of safety-related structures, systems, and components are subjected to quality assurance requirements as specified in written procedures. These procedures include provisions for review and

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control in accordance with industry standards and specifications and the safety-related function of the expendable or consumable item.

5.8 Development of the QA Program

5.8.1 The Operations Quality Assurance Program was fully implemented 90 days prior to initial fuel loading. The QA Program shall be in effect throughout the operating life of the STPEGS.

5.9 QA Program Documents

5.9.1 The QA Program shall be implemented with documented instructions, procedures, and drawings which include appropriate quantitative and qualitative acceptance criteria for determining that prescribed activities have been satisfactorily accomplished. Procedures shall include the control of the sequence of required inspections, tests, and other operations when important to quality. To change these controls, the individual procedure must be changed and shall require the same level of review and approval given to the original procedure. Such instructions, procedures, and drawings are reviewed and approved for compliance with requirements appropriate to their safety significance by individuals qualified to do so.

5.10 Personnel Indoctrination and Training

5.10.1 General indoctrination and training programs shall be provided for site personnel to assure that they are knowledgeable regarding quality programs and requirements. The training requirements for STPEGS personnel are described in UFSAR Section 13.2. Records shall demonstrate compliance with applicable requirements. Personnel performing complex, unusual, or potentially hazardous work shall be instructed in special indoctrination or briefing sessions. Emphasis shall be on special requirements for safety of personnel, radiation control and protection, unique features of equipment and systems, operating constraints, and control requirements in effect during performance of work. Where required by codes and standards, personnel are trained,

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qualified, and certified according to written procedures in the principles and techniques of performing specific activities.

5.11 Policies and Goals

5.11.1 It is the policy of HL&P, acting as licensee and Project Manager for itself and the other owners of the STPEGS, to assure that the design, procurement, construction, testing, and operation of the STPEGS are in conformance with specifications, procedures, codes, and Nuclear Regulatory Commission (NRC) regulations. The responsibility of each organization supporting the STPEGS is to ensure that the requirements stated in this QA Program are incorporated into procedures. Adherence to those procedures is mandatory for all STPEGS organizations and contractors or vendors providing items or services covered by the QA Program.

5.11.2 The OQAP identifies activities and establishes requirements for procedures which identify, report, and verify the resolution of quality problems. The implementing procedures call for the resolution of quality problems at the lowest possible authorized level. However, if a dispute is encountered in the resolution of a quality problem which cannot be resolved at lower levels, the General Manager, Nuclear Assurance & Licensing or Director, Quality shall present the problem to the Group Vice President, Nuclear, for resolution.

5.12 Control of Activities

5.12.1 The OQAP requires Quality department review and/or approval of procedures which control selected activities. These procedures shall require the use of the proper equipment, completion of prerequisites for starting an activity, and suitable environment for performing the activity. Procedures will comply with the appropriate standards.

5.12.2 STPEGS personnel attend planning, scheduling, and status meetings affecting safety significant activities as necessary to assure adequate QA coverage and program application exists.

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5.13 Management Review

- 5.13.1 The implementation of the OQAP requirements shall be verified through independent and integral control activities. The Quality organization, under the General Manager, NA&L, shall conduct independent overview activities of the operating plant and of the interfacing organizations' activities.
- 5.13.2 The results of the independent overview activities are presented in a periodic report to the Group Vice President, Nuclear.
- 5.13.3 Assessments of HL&P's implementation of the OQAP are conducted under the cognizance of the Nuclear Safety Review Board and results are transmitted to the Group Vice President, Nuclear for review and/or action.
- 5.13.4 STPEGS may use the services of architect-engineer firms, Nuclear Steam Supply System (NSSS) suppliers, fuel fabricators, constructors, and others which provide or augment STPEGS efforts during operations. The QA programs of such contractors or consultants shall be subject to review, evaluation, and acceptance by the Quality organization before initiation of activities affected by the program.

5.14 Operations Quality Assurance Plan Changes

- 5.14.1 HL&P is committed to maintaining the OQAP as an effective and meaningful document to provide programmatic direction on STPEGS. Changes to the OQAP will be processed under 10CFR50.54(a).

5.15 Computer Code Programs

- 5.15.1 The development, control, and use of computer code programs which affect items and activities will be controlled. Prior to use of a computer code program, the appropriateness of the program shall be verified. In addition, all such programs shall be appropriately certified for use.

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6.0 DOCUMENTATION

6.1 Procedures which are generated as required by this chapter shall identify the records which are required to implement and document those activities. The records shall be controlled in accordance with Reference 4.4.

7.0 ATTACHMENTS

7.1 Attachment I OQAP - 10CFR50, Appendix. B Matrix

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ATTACHMENT I

OPERATIONS QUALITY ASSURANCE PLAN CHAPTERS 10CFR50, APPENDIX B CRITERIA

1.0	Organization	I
2.0	Program Description	II
3.0	Conduct of Plant Operations	V, XIV
4.0	Qualification, Training and Certification of Personnel	II, IX
5.0	Maintenance, Installation of Modifications, and Related Activities	III, V, VIII, IX
6.0	Design and Modification Control	III
7.0	Procurement	IV, VIII, X, XIII, XIV, VII
8.0	Control and Issuance of Documents	V, VI
9.0	Control of Material	VII, VIII, XIII, XIV
10.0	Inspection	X
11.0	Test Control	XI
12.0	Instrument and Calibration Control	XII
13.0	Deficiency Control	XV, XVI
14.0	Records Control	XVII
15.0	QA Audit and Surveillance	XVIII
16.0	Nuclear Fuel Management	III, IV, VII, VIII, X, XIII, XIV

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OPERATIONS QUALITY ASSURANCE PLAN CHAPTERS 10CFR50, APPENDIX B CRITERIA

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| 17.0 | ASME Section XI Repairs and Replacements | * |
| 18.0 | ASME Section XI Examination and Testing | * |

NOTE

- * These sections do not address 10CFR50, Appendix B criteria, but are included in the OQAP to identify STPEGS Code and ASME Section XI commitments.