



KANSAS GAS AND ELECTRIC COMPANY

GLENN L. KOFITER
VICE PRESIDENT - NRC

June 28, 1984

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Mr. John T. Collins, Regional Administrator
U.S. Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76011

KMLNRC 84-099
Re: Docket No. STN 50-482
Subj: Quality Assurance Program Changes

Gentlemen:

10CFR50.55 requires that after March 11, 1983, each Construction Permit holder may change a previously accepted Quality Assurance Program description included in the Final Safety Analysis Report, provided the change does not reduce the commitments in the program previously accepted by the NRC.

Transmitted herewith are changed pages to the Wolf Creek Operating Quality Program described in the Wolf Creek Final Safety Analysis Report. The attached material also describes the reason for the change and the basis for concluding that the change does not reduce the KG&E commitments in the Operating Quality Program previously accepted by the NRC.

This information will be formally incorporated into Revision 13 of the Wolf Creek Final Safety Analysis Report. The information is hereby incorporated into the Wolf Creek Generating Station, Unit No. 1, Operating License Application.

Yours very truly,

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Revisions to the Final Safety Analysis Report Addendum and the reasons for the changes are shown by numbered bars next to the modified text. The numbers correspond to the reasons given below:

1. Reason for Change

This change clears up a potential ambiguity in the text.

Basis for Concluding that the Revised Program Satisfies 10CFR50, Appendix B

The text has been modified to more clearly describe the Wolf Creek Program. No program changes have been made with regard to this text change.

2. Reason for Change

This change modifies the text to be consistent with portions of the FSAR which were previously revised.

Basis for Concluding that the Revised Program Satisfies 10CFR50, Appendix B

No program change has been made with regard to this text change.

3. Reason for Change

This change corrects a typographical error.

Basis for Concluding that the Revised Program Satisfies 10CFR50, Appendix B

No program change has been made with regard to this text change.

4. Reason for Change

This change updates the division of responsibilities to be consistent with the revised organizational structure.

Basis for Concluding that the Revised Program Satisfies 10CFR50, Appendix B

The revised text provides delineation of the authority and duties of positions performing quality functions. These organizational elements maintain sufficient authority and independence as required by Appendix B.

5. Reason for Change

This change expands the description of the manuals and/or clarifies their function and interrelation.

Basis for Concluding that the Revised Program Satisfies
10CFR50, Appendix B

No program change has been made with regard to this text change. The manual descriptions have been changed per a request from the NRC.

OATH OF AFFIRMATION

STATE OF KANSAS)
) SS:
COUNTY OF SEDGWICK)

I, Glenn L. Koester, of lawful age, being duly sworn upon oath, do depose, state and affirm that I am Vice President - Nuclear of Kansas Gas and Electric Company, Wichita, Kansas, that I have signed the foregoing letter of transmittal, know the contents thereof, and that all statements contained therein are true.

KANSAS GAS AND ELECTRIC COMPANY

ATTEST:

E. D. Prothro
E.D. Prothro, Assistant Secretary

By Glenn L. Koester
Glenn L. Koester
Vice President - Nuclear

STATE OF KANSAS)
) SS:
COUNTY OF SEDGWICK)

BE IT REMEMBERED that on this 28th day of June, 1984, before me, Evelyn L. Fry, a Notary, personally appeared Glenn L. Koester, Vice President - Nuclear of Kansas Gas and Electric Company, Wichita, Kansas, who is personally known to me and who executed the foregoing instrument, and he duly acknowledged the execution of the same for and on behalf of and as the act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal the date and year above written.



Evelyn L. Fry
Evelyn L. Fry, Notary

My Commission expires on August 15, 1984.

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CHAPTER 17.0

QUALITY ASSURANCE

17.2 QUALITY ASSURANCE DURING THE OPERATION PHASE

17.2.0 INTRODUCTION

17.2.0.1 Scope

This chapter of the FSAR sets forth the requirements for establishing and maintaining an operating Quality program for the Wolf Creek Generating Station (WCGS) during the operations phase. The program provides control over activities affecting quality as required by 10 CFR 50, Appendix B, and is structured to comply with NRC Regulatory Guide 1.33. | ④

17.2.0.2 Corporate Policy

The policy of Kansas Gas and Electric Company (KG&E) is to develop, implement, and maintain the operating Quality program for the WCGS as regulated by provisions of the Nuclear Regulatory Commission (NRC) operating license and amendments thereto. The program is applied to those activities regarding structures, systems, and components necessary to assure: | ⑩

1. The integrity of the reactor coolant pressure boundary
2. The capability to shut down and maintain the reactor in a safe shutdown condition
3. The capability to prevent or mitigate the consequences of accidents which could result in offsite exposures comparable to the guideline exposures of 10 CFR 100

17.2.0.3 Program Applicability

The activities controlled by the operating Quality program include preoperational testing, startup testing, operations, maintenance, refueling and modifications. Also controlled by the operating Quality program are certain construction completion activities such as component tests, flushing, and hydrostatic tests performed by the KG&E startup organization. The extent of control over these activities as they affect quality is consistent with their importance to nuclear safety. | ⑩

Early implementation of the operating Quality program is not intended to require activities to be performed earlier than would be the case if they were performed under the Design and Construction QA Program. When structures, systems, or components are released by the construction forces to the KG&E startup organization, | ⑩

the KG&E startup forces, and subsequently the operating forces, will start out conducting their activities under the systems of control which comprise the operating Quality program. | ①

Construction organizations committed to the requirements of the Design and Construction QA Program may provide quality related activities to organization(s) committed to the requirements of the operating Quality program (e.g. procurement and receipt inspection). A description of the QA Program elements controlling these activities can be found in the appropriate section(s) of the SNUPPS QA Programs for Design and Construction Manual. The construction organization providing the safety-related activity for the operations/startup applications shall assure that all personnel are qualified in accordance with the Design and Construction QA Program qualification requirements. Both KG&E Construction and Operations shall be responsible for establishing procedures to control the interface between the construction organization(s) providing the activity and the using organization(s). | ①

Included within the operating Quality program are the development, control and use of computer code programs. The Nuclear Plant Engineering Division, Nuclear Services Division, and the Plant Staff are responsible for the computer programs used internally. Internal activities associated with verification, documentation, and use of computer programs, utilized in safety-related analyses, are accomplished in accordance with documented procedures. Verification that the procedures are being followed and are effective in controlling computer program use is provided by internal audits by the Quality Branch. Assurance that external organizations are controlling activities associated with computer programs used for safety-related analysis is provided through the supplier qualification process, through imposition of requirements in purchase orders and contracts and/or through audits. | ①

17.2.0.4 Special Scope Programs

In controlling activities to the extent consistent with their effect on safety, KG&E formally designates and applies selected quality requirements to fire protection, environmental control, and security. Although not strictly safety-related, the applicable quality controls applied to these special scope programs are described as follows:

Fire Protection	See Appendix 9.5A of the SNUPPS Standard Plant FSAR and Table 9.5-1, WC addenda.
Environmental Controls	See Section 13.5.2.2.8
Site Security	See W&GS Physical Security Plan

17.2.1 ORGANIZATION

17.2.1.1 Scope

KG&E has established an organizational structure for quality activities. This section identifies the organizational structure; management positions and responsibilities; and delegation of authority for the development, implementation, and maintenance of the operating Quality program. KG&E shall retain responsibility for the establishment and execution of the operating Quality program, although certain program activities may be delegated to others. The organizational structure of KG&E's top management is shown in Figure 17.2-1. The organizational structure responsible for implementing the operating Quality program is shown in Figure 17.2-2. The organizations of the WCGS staff and the Quality organization are shown in Figures 17.1-1 and 17.1-2, respectively.

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17.2.1.2 President and Chairman of the Board

The President and Chairman of the Board is responsible for promulgating quality program requirements. He has responsibility for quality assurance, engineering, procurement, configuration management, construction, and operation of the WCGS. He endorses KG&E's Quality Assurance policy statement and delegates the authority necessary to implement this policy. He directs all KG&E employees who work in direct support of nuclear operations activities or interface with nuclear operations to comply with the operating Quality program.

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17.2.1.2a Group Vice President - Technical Services

The Group Vice President - Technical Services reports directly to the President and Chairman of the Board. The duties and responsibilities of the Group Vice President - Technical Services include being in charge of all technical aspects of Kansas Gas and Electric Company. These technical aspects encompass operations, transmission and distribution, engineering and construction. This includes the construction and operation phases of WCGS.

17.2.1.3 Vice President - Nuclear

The Vice President - Nuclear, under the direction of the Group Vice President - Technical Services is responsible for the implementation of KG&E's Quality Assurance Policy and the Quality Assurance Programs which devolve from this policy. He authorizes staffing of the Quality Branch, the WCGS, and the engineering and services divisions which support the WCGS. He is responsible for directing activities which support the design, construction, and operation of the WCGS and for coordinating supportive activities performed by other internal and external groups which are not under his direct administrative control. He has corporate responsibility for the operation, physical control, and security of the WCGS.

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The Wolf Creek Project Director reports directly to the Vice President - Nuclear. Also reporting to the Vice President-Nuclear are the Director Quality and various support services functions. The Vice President - Nuclear provides overall program direction on nuclear matters to several managers as shown in Figure 17.2-2.

17.2.1.3a Wolf Creek Project Director

The Wolf Creek Project Director reports to the Vice President-Nuclear and has direct responsibility for construction, engineering and support for the Wolf Creek Generating Station, Unit No. 1. The Wolf Creek Project Director provides day-to-day project direction to:

- a. Construction Manager
- b. Director Nuclear Operations
- c. Manager Nuclear Services
- d. Manager Nuclear Plant Engineering
- e. Plant Manager, and
- f. Manager Startup

The Vice President - Nuclear and the Wolf Creek Project Director together with the management personnel listed above function as a team to accomplish the design, construction and startup of the Wolf Creek Generating Station.

17.2.1.3b Manager Nuclear Administrative Services

The Manager Nuclear Administrative Services reports directly to the Vice President - Nuclear and is responsible for providing staff human resource, administrative and technical assistance to the Vice President - Nuclear. In addition, the Manager Administrative Services oversees department staffing efforts, aids in achieving social impact goals and provides guidance in application of policies to the work force. The Nuclear Coordinators and Supervisor Project Planning and Controls report to the Manager Administrative Services.

17.2.1.3c Manager Management Systems

The Manager Management Systems reports directly to the Vice President-Nuclear and is responsible for the Management Systems Program which includes Configuration Management, Document Control, Records Management and Methods and Procedures and WCGS Policy/Directive and General Procedure Modification Programs.

In executing his responsibilities, he develops, implements, maintains and monitors the implementation of procedures for configuration identification, control, verification and status accounting; for document control; and for records management. Additionally, he is responsible for administrating the Configuration Control Board.

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Through the Records Management Programs, he provides for the capture of records generated during all phases of WCGS and is responsible for the receipt, encoding, data entry, microfilming, storage, and retrieval of both commercial records and those required by applicable industry codes and standards. 4

Through the Systems and Procedures Program, He develops and/or provides aid in the development of management procedures and performs coordination of management policies/directives and procedures for the Nuclear Department.

17.2.1.4 Director Quality

The Director Quality reports directly to the Vice President - Nuclear and devotes full attention to WCGS quality matters. He is responsible for the development and for assuring implementation of the operating Quality program. The Director Quality is responsible for staffing the Quality Branch and for assuring that QA and QC personnel are adequately trained and experienced to perform their assigned tasks. He carries out the directives of the Quality Assurance Committee and provides the Committee with information related to the effectiveness of the implementation of the operating Quality program. The qualification requirements for the Director Quality position are: A bachelor degree in Engineering or related sciences plus six years of professional level experience in Nuclear Quality Assurance or six years of supervisory experience plus two years of Nuclear Quality Assurance experience, or equivalent professional level experience in nuclear quality assurance including six years of supervisory/management experience. 1 0 1 0

17.2.1.4.1 Manager Quality Assurance (WCGS)

The Manager Quality Assurance (WCGS), who reports to the Director Quality, devotes full attention to QA matters. He is responsible for verifying that an adequate QA program is developed and implemented for safety-related activities which occur at the WCGS. The Manager Quality Assurance (WCGS) is assigned [work location] to the Wolf Creek site. He maintains a staff and provides them with technical and administrative direction. He is responsible for establishing and implementing a comprehensive plant site audit program. The qualifications of the Manager Quality Assurance (WCGS) are a Bachelor's Degree in Engineering or related science and at the time of initial core loading or appointment to the position and will have four years experience in the field of quality assurance or equivalent number of years of nuclear plant experience or combination of the two, at least one year shall be nuclear power plant quality assurance implementation experience.

17.2.1.4.4 Quality Branch Personnel Independence

The authorities and duties of QA and QC personnel and other organizations performing quality verification functions are clearly established in written procedures. Such persons have sufficient authority and organizational freedom to identify quality problems; to initiate, recommend, or provide solutions; and to verify corrective action. Assurance of quality by auditing, inspecting, checking, or otherwise verifying program activities is by personnel independent of the individual or group performing the specific activity.

17.2.1.5 Manager Nuclear Plant Engineering

The Manager Nuclear Plant Engineering reports to the Vice President - Nuclear for overall program direction and to the Wolf Creek Project Director for day-to-day project direction. He is responsible for station modifications, additions, engineering studies, and design reviews which are conducted at the general office or subcontracted by the general office to an outside organization.

17.2.1.6 Manager Nuclear Services

The Manager Nuclear Services reports to the Vice President-Nuclear for overall program direction and to the Wolf Creek Project Director for day-to-day project direction. He is responsible for providing services in the areas of licensing, fuels management, fuel procurement, and safety analysis. He is responsible for home office support of the plant in nuclear engineering, chemistry, health physics, and environmental areas.

17.2.1.7 Director Nuclear Operations

The Director Nuclear Operations reports to the Vice President-Nuclear for overall program direction and to the Wolf Creek Project Director for day-to-day project direction. He is responsible for the operations, training and startup departments. The Plant Manager and the Manager Nuclear Training report to the Director Nuclear Operations for overall program direction. These two managers receive day-to-day project direction from the Wolf Creek Project Director. The Director Nuclear Operations is also responsible for preparing those portions of the WCGS operating and maintenance budget not specifically assigned to other divisions.

17.2.1.7.1 Plant Manager

The Plant Manager reports to the Director Nuclear Operations for overall program direction and to the Wolf Creek Project Director for day-to-day project direction. He is responsible

17.2.1.8 Director - Purchasing

The Director - Purchasing reports administratively to the Group Vice President - Administration who reports to the President and Chairman of the Board. The Director - Purchasing also has reporting responsibilities to the Group Vice President - Technical Services for materials, systems, components and parts (not delegated to outside organizations) that are needed to support WCGS. He is responsible for issuing purchase orders and contracts, for the commercial content of those documents, the financial/commercial qualification of vendors, and for processing invoices.

17.2.1.9 Quality Assurance Committee (QAC)

KG&E has established a Quality Assurance Committee (QAC). The prime responsibility of this committee is to measure the effectiveness of KG&E's operating Quality program and initiate changes when warranted. The permanent members of this Committee are the Vice President-Nuclear, Vice President-Engineering, Legal Counsel, Superintendent Production Fossil Plants and the Director Nuclear Operations. ①

In carrying out their responsibilities, the members of the Quality Assurance Committee shall utilize information received from internal audit reports; audit reports of other organizations supplying services or materials which are important to safety; summaries of nonconformance reports, corrective action reports, and NRC I&E inspection reports and notices of violation, if any.

The QAC shall meet at least once during each calendar quarter. The chairman of the committee is the Vice President-Nuclear, who may call additional meetings as necessary. The committee will not concern itself with minor isolated quality problems but will take a broad overview of KG&E's operating Quality program and make decisions which will provide meaningful adjustments to the operating Quality program. The committee will review deficiencies and will establish actions or affirm that adequate corrections are being made. ①

Notices of violation received from the NRC and responses made to the NRC which are quality related shall be reviewed by members of the QAC. The Chairman will assign the responsibility for preparing reports to be sent to the NRC and will review and issue all such reports.

17.2.1.10 Safety Review Committees

Safety review committees shall be established at the WCGS (the Plant Safety Review Committee) and at the KG&E General Office (the Nuclear Safety Review Committee) to provide independent review of those items required by the WCGS Technical Specifications. Committee membership and duties are described in the Administrative Controls Section of the Technical Specifications.

17.2.2 QUALITY ASSURANCE PROGRAM

17.2.2.1 Scope

KG&E has established an operating Quality program which controls activities affecting quality. The program encompasses those quality activities necessary to support the operating phase of the WCGS. The total operating Quality program complies with 10 CFR 50, Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants" and generally follows the guidance of Regulatory Guide 1.33. Several alternate methods of meeting Regulatory Guide 1.33 are described in this chapter and in Appendix 3A.

17.2.2.2 Identification of Safety-Related Items

The scope and activity applicability of the operating Quality program are described in Section 17.2.0. Safety-related structures, systems, and components are identified in Table 3.2-1 of the Standard Plant FSAR. This list includes structures, systems, and components identified as safety-related during the design and construction phase and may be modified as required during operations, consistent with their importance to nuclear safety. Table 3.2-1 is maintained current by the Manager Nuclear Services with changes to the table being approved by the Director Quality, Manager Nuclear Plant Engineering, and Director Nuclear Operations.

During the operational phase the operating Quality program is the governing quality assurance program for safety-related structures, systems, components and consumables. The programs identified under the "Quality Assurance" heading of Table 3.2-1 are those utilized during the design and construction phase. Should safety-related equipment or services be procured from Bechtel, Westinghouse, or others during the operating phase, quality assurance requirements will be determined and imposed in accordance with Sections 17.2.4 and 17.2.7.

17.2.2.3 Operating Quality Program Implementation

The operating Quality program shall be implemented at least 90 days prior to fuel loading. The operating Quality program shall be implemented throughout the operating life of the WCGS. Special equipment, environmental conditions, skills, or processes will be provided as necessary to demonstrate effective implementation of the operating Quality program.

Implementation of the operating Quality program by KG&E is directed towards assurance that operating phase activities and maintenance activities are conducted under controlled conditions and in compliance with applicable regulatory requirements, including 10 CFR 50, Appendix B. Management responsible for conducting safety-related activities shall be responsible for providing approved procedures prior to initiating the activity.

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Commencing with the issuance of an operating license, changes to the quality program description in this chapter of the FSAR shall be submitted to the NRC at least annually. If any such change reduces the commitments previously made, NRC approval must be obtained prior to implementation.

17.2.2.4 Operating Quality Program Documentation

Consistent with the schedule for accomplishing operations phase activities, the operating Quality program shall be established and documented. The operating Quality program shall be documented as follows to meet program objectives: | 0

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1. Quality Policy

The governing policy statement of the operating Quality program is approved by the President and Chairman of the Board and is contained in the Wolf Creek Project Policy Manual.

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2. Quality Program Manual (QPM)

The manual (QPM) that provides instruction to the Quality Branch for the definition and conduct of Branch responsibilities as described in the operating Quality program and assigned by the Wolf Creek Project Policy Manual. The introduction to the QPM includes a governing policy statement by the KG&E Group Vice President Technical Services and Vice President-Nuclear.

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3. Wolf Creek Project Policy Manual (WCPPM)

The WCPPM defines project policy relative to the management of the Wolf Creek Project. Specific responsibilities and authorities are defined for the various individuals and organizations involved. The manual also describes the operating Quality program which is applicable to all KG&E personnel assigned to the project. This manual and changes thereto are approved by the Vice President-Nuclear.

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4. Procedures Manuals

The Nuclear Department General Procedures Manual, the WCGS Procedure Manuals and the KG&E Procedures Manual provide control for KG&E activities covered by the operating Quality program.

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Table 17.2-1 shows a listing of controlled procedure manuals. These manuals contain mandatory requirements which must be implemented by responsible organizations and individuals.

Table 17.2-2 lists areas of operating Quality program implementing procedural coverage and indicates the related criteria of 10 CFR 50, Appendix B, covered by each area. This listing represents general areas of procedural coverage. Provisions for procedure consolidation, separation, deletions, additions, or minor program changes do not permit including an absolute listing of implementing procedures.

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Table 17.2-3 lists quality program commitments to Regulatory Guides and endorsed codes and standards.

17.2.2.5 Control of KG&E Contractors

KG&E may employ the services of architect-engineers, NSSS suppliers, fuel fabricators, constructors, and others which provide or augment KG&E efforts during the operational phase. These organizations shall be required to work under a quality assurance program to provide control of quality activities consistent with the scope of their assigned work. The quality assurance programs of such contractors or consultants shall be subject to review, evaluation, and acceptance by the KG&E Quality Branch prior to initiation of activities affected by the program. | ②

17.2.2.6 Operating Quality Program Verification of Implementation

Achievement of the requirements of the operating Quality program shall be verified through independent and integral control activities. The Quality Branch under the Director Quality shall audit general office internal and interfacing quality activities and shall conduct audits and surveillance of the operating plant. These audits shall assure overall implementation verification of the operating Quality program. Quality Branch personnel will perform audit, surveillance and inspection of quality activities performed by the operating organization, consultants, suppliers, and other KG&E personnel.

17.2.2.7 Personnel Training and Qualification

General indoctrination and training programs shall be provided for the general office and plant site personnel to assure that they are knowledgeable regarding quality procedures and requirements. The requirements for training of WCGS personnel are described in Section 13.2. The training of plant operating personnel is the responsibility of the plant Training Supervisor. Records of training shall be maintained to demonstrate compliance with the qualification requirements of 10 CFR 55 and ANSI N18.1/ANS-3.1, "Selection and Training of Nuclear Power Plant Personnel". KG&E 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 or qualified according to written procedures in the principles and techniques of performing specific activities described in sections 17.2.9, 17.2.10, and 17.2.11 of this chapter.

Training will be conducted in a time frame adequate to allow personnel to prepare for their job responsibilities. Retraining will be scheduled as necessary to assure adequate skills are maintained. KG&E personnel assigned to perform specialized work tasks or to augment the plant staff for major modifications and contractor personnel performing work onsite shall receive indoctrination in the following subjects as required prior to commencing work:

1. Safety rules
2. Health-physics control and monitoring of radiation exposure

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3. Plant security rules
4. Emergency provisions
5. Applicable operating Quality program requirements

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17.2.3 DESIGN CONTROL

17.2.3.1 Scope

The design, modification, addition, and replacement of safety-related structures, systems, and components at the WCGS shall be controlled to assure that appropriate measures are implemented and to assure that "as-built" quality is not degraded. The plant design is defined by KG&E, NSSS and the A/E in selected supplier design drawings and specifications which illustrate the general arrangement and details of safety-related structures, systems, and components and define the requirements for assuring their continuing capability to perform their intended operational or safety design function. 10

Design activities shall include the correct translation of regulatory requirements and design bases into specifications, drawings, written procedures, and instructions (design output) that define the design. Design analyses regarding reactor physics, stress, seismic, thermal, hydraulic, radiation, and accident analyses, used to produce design output documents, shall be performed when appropriate. Design verification shall be performed, and "reviews of design" will be done to familiarize KG&E personnel with design features.

Design activities shall also include 1) reviewing the applicability of standards; 2) reviewing commercial or previously approved materials, parts, or equipment for suitability of application; 3) reviewing the compatibility of materials used in the design; 4) reviewing the accessibility of equipment and components for inservice inspection, maintenance, and repair; 5) specifying criteria for inspection and test; and 6) reviewing and approving procedures for special processes, and verification of computer codes used in the design process.

Procedures shall establish requirements, assign responsibilities and provide control of design activities to assure performance in a planned, controlled and orderly manner.

17.2.3.2 Design Responsibilities

Design, including related procurement efforts, may be carried out by the WCGS staff, Nuclear Plant Engineering, Nuclear Services, or outside organizations. Generally, design changes will be performed or contracted by Nuclear Plant Engineering. (3)

17.2.3.3 Design Criteria

Design requirements and changes thereto shall be identified, documented, reviewed and approved to assure incorporation of appropriate quality standards in design documents. Design requirements and quality standards shall be described to an appropriate level of detail in design criteria. Any exception to quality standards will be listed. Criteria for modifications to structures, systems and components shall consider, as a minimum, the design bases described in the Standard Plant FSAR and Wolf Creek FSAR Addendum. Design criteria shall be reviewed by the Quality Branch for seismic and quality group classification, selection of quality standards, and deviations from quality standards for acceptability. All design criteria shall be satisfied in the design.

17.2.3.4 Design Process Controls

The organization performing design shall have responsibility for design control unless specified otherwise. Control of design shall be specified in procedures. These procedures shall include instructions for defining typical design requirements; communicating needed design information across internal and external interfaces; preparing, reviewing, approving, revising, and performing design reviews and reviews of design; and controlling field changes. Management Systems Document Control Section prepares procedures for releasing, distributing and maintaining design documents in KG&E's scope. (4)

Design control shall involve measures which include a definition of design requirements; a design process which includes design analysis and delineation of requirements through the issuing of drawings, specifications, and other design documents (design outputs); and design verification.

The design process shall establish controls for releasing technically adequate and accurate design documents in a controlled manner with a timely distribution to responsible individuals and groups. Documents and revisions shall be controlled through the use of written procedures which apply to the issuer, distributor, and user to prevent inadvertent use of superseded documents. Document control procedures shall govern the collection, storage, and maintenance of design documents, results of design document reviews, and changes thereto.

Design documents subject to procedural control include, but are not limited to: specifications, calculations, computer

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with new regulatory requirements. Design changes are defined to mean 1) planned changes in the basic plant design which modify the plant response, general design criteria, and specification requirements; and 2) the substitution of equivalent hardware or the substitution of nonsafety-related parts or components into safety-related components or systems. Changes in the WCGS basic design shall be aimed at improving safety, performance, maintainability, reliability, or inspectability. An engineering evaluation assures that these changes are consistent with the performance requirements specified in existing design documents.

Requests for design changes affecting safety-related structures, systems, and components shall be processed through the Configuration Control Board. | ①

Procedures shall specify requirements for the review and approval of design changes by the organizations that performed the original design, if appropriate. Design control activities may be delegated to others provided they have access to background and technical information. Design changes shall be communicated to appropriate plant personnel when such changes may affect the performance of their duties. | ①

17.2.3.8 Design Review Committees

Independent of the responsibilities of the design organization, the requirements of the Plant Safety Review Committee (PSRC) and the Nuclear Safety Review Committee (NSRC) as specified in the Administrative Controls Section of the Technical Specifications, shall be satisfied. Design changes involving a modification or a creation of basic design criteria require a safety evaluation and review, and concurrence by the PSRC. Design changes which involve the substitution of hardware require a safety evaluation by the PSRC and approval by the Plant Manager; however, those changes which involve an unreviewed safety question or change in Technical Specifications also require a review and concurrence by the NSRC. When design is performed by an outside organization, the Manager Nuclear Plant Engineering shall perform or coordinate a review of the design for operability, maintainability, inspectability, SAR commitment compatibility, and design requirements imposed by plant equipment. In addition, the Manager Nuclear Plant Engineering shall identify and control design interfaces and coordinate the design process between internal divisions and the outside organization(s).

When required, safety analyses which consider the effect of the design as described in the design documents may be performed by KG&E or outside organizations. These analyses shall provide the basis for the PSRC safety evaluations which are

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performed to determine that design changes do not involve an unreviewed safety question. Approved safety analyses or names of outside organizations performing the analyses shall be submitted to the PSRC with the required approved design input documents. The safety analyses for design changes involving the substitution of hardware shall assure that the changes are consistent with and do not alter the performance requirements specified in existing design documents. The engineering approval of design documents and safety analyses prepared by outside organizations shall be by the outside organization unless otherwise specified. ③

The PSRC shall perform safety evaluations and review design changes to determine whether or not they involve a change in Technical Specifications. The PSRC shall review design documents as necessary to recommend final approval of design criteria, identify unreviewed safety questions, or identify needed changes to Technical Specifications. Proposed changes to Technical Specifications shall be forwarded to the NSRC for review and approval pursuant to 10 CFR 50. The NSRC shall review appropriate material to verify that proposed modifications do not in fact involve an unreviewed safety question.

Completed design changes and test results shall be reviewed by the PSRC. Records shall be maintained which reflect current design, including safety analyses, safety evaluations, design change installation procedures, material identification documents, procurement documents, special process documents, equipment and installation specifications, and as-built drawings.

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17.2.4 PROCUREMENT DOCUMENT CONTROL

17.2.4.1 Scope

Procurement document control applies to documents employed to procure safety-related materials, parts, components, and services required to modify, maintain, repair, test, inspect, or operate the WCGS. KG&E shall control procurement documents by written procedures which establish requirements and assign responsibility for measures to assure that applicable regulatory requirements, design bases, and other requirements necessary to assure quality are included in documents employed for the procurement of safety-related materials, parts, components, and services.

17.2.4.2 Procurement Responsibility

Responsibility for procurement does not reside in a single group but is a joint effort of KG&E Nuclear divisions (WCGS staff, Nuclear Plant Engineering, and Nuclear Services), Quality, and the Purchasing Department. These groups have responsibility for technical content, quality requirements, and commercial provisions.

17.2.4.3 Procedural Control

Written procedures shall include controls, as applicable, for the preparation, content, review, approval, and processing of the following types of procurement documents:

1. Purchase Requisitions
2. Letters of Intent
3. Purchase Orders and Contracts

17.2.4.4 Quality Classification

Each item or service to be procured is evaluated by the procurement document originator to determine whether or not it performs a safety-related function or involves activities which affect the function of safety-related materials, parts, or components and to appraise the importance of this function to plant or public safety. For those cases where it is unclear if an individual piece (i.e., part of a safety-related structure, system, or component or service) is governed by the KG&E operating Quality program, an engineering evaluation shall be conducted. The evaluation shall classify the safety relationship of the service or questionable component parts or items of safety-related structures, systems, or components. The evaluation shall be

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Reviews of purchasing documents by Quality Branch personnel shall verify that quality requirements are correctly stated, verifiable, and controllable; that acceptance/rejection criteria are included; and that the documents have been prepared, reviewed, and approved in accordance with KG&E's operating Quality program requirements.

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17.2.4.6 Purchase Requisitions

Purchase Requisition forms shall be used to initiate the procurement of safety-related materials, parts, components and services. Procurement shall be initiated by Wolf Creek staff, Nuclear Plant Engineering, Nuclear Services, or Quality Branch personnel.

Purchase Requisitions shall include or invoke specifications, bills of material, drawings, catalog number, full description, or item identification as applicable. Commercial items shall rely on proven design and utilize verification methods by the purchaser in lieu of supplier controls.

Purchase Requisitions for safety-related materials, parts, components, or services shall be reviewed by engineering personnel (WCGS staff engineers, Nuclear Plant Engineering or Nuclear Services) and Quality Branch personnel as detailed in the applicable procedures to verify that adequate technical and quality requirements, respectively have been specified, unless the procurement is a duplicate order invoking identical technical and quality requirements which have previously been reviewed and approved. The reviews for technical and quality requirements shall be by someone other than the originator of the requisition. 10

17.2.4.7 Letters of Intent

Letters of Intent may be utilized with suppliers of materials, parts, components, and services for the purpose of reserving schedule space prior to the resolution of the requirements to be included in a purchase order or contract. Letters of Intent shall specify that no quality-affecting activities shall begin until an approved purchase order or contract is executed; however, in the event a Letter of Intent is issued for the purpose of securing a binding agreement prior to the issuance of such documents, it shall specify the applicable quality and technical requirements. Letters of Intent shall be reviewed by legal counsel and Nuclear Plant Engineering, approved by the Quality Branch and issued by the Purchasing Department. If the contract is to be for nuclear fuel-related goods or services the Nuclear Services division shall perform the review instead of Nuclear Plant Engineering.

17.2.4.8 Purchase Orders and Contracts

Purchase Orders and Contracts are prepared and issued by the Purchasing Department, and establish for the vendors the technical and quality requirements which must be met. These documents also establish the commercial conditions (cost, schedule, warranty, insurance, etc.) for the procurement action.

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Purchase Orders and Contracts shall accurately reflect the technical and quality requirements established by the Requisition. If during negotiations with the vendor it becomes necessary or commercially desirable to change technical or quality requirements, such changes must be presented to the individuals who approved the original requirements for approval. If the changes cannot be approved, a different vendor shall be selected.

17.2.4.9 Purchase Order Award

During the WCGS operating life, procurement may be made with the following:

1. Suppliers judged capable (prior to award) of providing items or services in accordance with procurement document requirements and a quality assurance program compatible with the item or service procured;
2. Suppliers and others in possession of hardware manufactured prior to award and whose acceptability can be determined by receiving inspection, an examination of quality verification documentation, or other suitable means;
3. Suppliers of off-the-shelf or commercial-grade items able to be ordered solely on the basis of published specifications; and
4. Outside organizations working under the KG&E operating Quality program.

Regardless of the basis for the acceptability of the procurement source, prior to the issuance of a purchase order or execution of a contract, a verification of the supplier/ outside organization acceptability shall be documented. A purchase order or contract may be issued prior to an assessment of supplier capability, provided a prohibition on safety-related work is imposed and if the purchase order is made contingent upon becoming qualified. Such suppliers shall be released to begin safety-related work when evaluated to be an acceptable procurement source. The process by which suppliers (requiring a preaward evaluation) are judged a capable procurement source is described in Section 17.2.7.

17.2.4.10 Document Distribution

To support the control of purchased materials (see 17.2.7) copies of purchase orders and other appropriate procurement documents shall be forwarded to the applicable receiving and

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17.2.5 INSTRUCTIONS, PROCEDURES, AND DRAWINGS

17.2.5.1 Scope

The quality activities associated with the operating phase shall be accomplished in accordance with documented instructions, procedures, drawings, or checklists. The degrees of control imposed shall be consistent with the relative importance of the activity to nuclear safety. The instruction shall specify the methods for complying with 10 CFR 50, Appendix B.

17.2.5.2 Preparation Requirements

The KG&E operating Quality program shall control activities affecting quality by providing measures for: 10

1. The preparation of procedures, instructions, specifications, drawings, or checklists of a type appropriate to the activity and its importance to safety;
2. The inclusion in these documents of quantitative and qualitative acceptance criteria for verifying that an activity has been satisfactorily accomplished;
3. The approval of these documents by responsible personnel prior to accomplishing an activity; and
4. The use of approved drawings, procedures, instructions, or checklists to accomplish an activity.

17.2.5.3 Contractor Controls

Procurement documents shall require outside organizations to have appropriate instructions, procedures, specifications, and drawings to meet the requirements of the operating Quality program. 10

17.2.5.4 Operations Documents

The WCGS staff and other responsible divisions shall provide written procedures and drawings as required for the operating phase. These procedures shall prescribe those KG&E activities which affect the function of safety-related structures, systems, and components.

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17.2.5.5 Review and Approval

The approval, issue, and control of the various implementing procedures, manual, and policy are as described in Sections 17.2.2 and 17.2.6. Plant procedures affecting the function of safety-related structures, systems, and components shall be reviewed by the PSRC in accordance with the approved WCGS administrative procedures as part of their responsibility to assure that day-to-day operating activities are conducted safely.

Proposed procedure revisions which involve a change in the Technical Specifications or an unreviewed safety question shall be referred to the Nuclear Safety Review Committee by the PSRC following its review. Temporary changes to procedures shall be controlled as described in the Technical Specifications.

Table 17.2-2 lists those types of activities under the control of the plant and other KG&E organizations' procedures. Procedures prepared for the KG&E procedures manual and administrative and inspection procedures for the WCGS Procedures Manual shall be reviewed by the Quality Branch for compliance with operating Quality program requirements.

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17.2.6 DOCUMENT CONTROL

17.2.6.1 Scope

Documents and their revisions which control activities affecting safety-related structures, systems, and components shall be prepared, reviewed by knowledgeable individuals, and approved by authorized personnel prior to release or issuing in accordance with written approved procedures.

Departments and organizations responsible for program implementing documents shall be required to provide and assure the necessary review and approval for instructions, procedures, specification, and drawings. Reviews and approvals assure that issued documents include proper quality and technical requirements, and are correct for intended use. Individuals or groups responsible for preparing, reviewing, and approving documents and revisions thereto shall be identified in written procedures.

Responsibility for performing controlled document distribution is shared by various divisions, including but not limited to Plant Operations, Quality Branch, Procurement (see Subsection 17.2.4), Nuclear Plant Engineering and Management Systems. Management Systems is responsible for the overall project document control program.

17.2.6.2 Preparation Controls

Documents describing the KG&E operating Quality program shall be controlled to an extent which considers the document type, its importance to safety, and the intended use of the document. Requirements of the operating Quality program shall be adhered to for the preparation, review, approval, and revision of procedures, instructions, or drawings.

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The controls over the issuing of documents shall provide for the availability of documents at the point of use prior to commencing an activity and the prompt transmittal of approved changes for incorporation into subsequent revisions. Measures shall be established to prevent the inadvertent use of superseded documents.

Types of documents which shall be controlled include:

- a. Technical Specifications;
- b. Design documents such as drawings, specifications, calculations and analyses, and documents related to computer codes;
- c. Procurement documents;
- d. Nonconformance reports;

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- e. Instructions and procedures for activities such as fabrication, construction, modification, installation, testing, inspection and operation;
- f. As-built drawings;
- g. Wolf Creek Project Policy Manual;
- h. Wolf Creek Generating Station Procedures Manual (which includes administrative procedures);
- i. KG&E Procedures Manual;
- j. FSAR;
- k. Quality Program Manual; and
- l. Topical reports prepared by KG&E or prepared by others exclusively for KG&E's use.

Control of documents shall be defined by a method of control consistent with the importance of the document. Documents shall be identified and distribution lists shall identify document holders. Acknowledgement of receipt of selected documents, incorporation of revisions, and control of obsolete documents shall be required of the document receiver or provided by the distributor. In addition, the distributors of these documents shall maintain a master list of the documents showing the effective revision date of each.

17.2.6.3 Change Control

Changes to documents shall be reviewed and approved where practical by the same department, group, or organization that performed the original review and approval; however, KG&E may assume or delegate this responsibility. Organizations which review and approve documents shall have access to pertinent information and knowledge of the intent of the original document.

17.2.6.4 Distribution Control

The Plant Manager shall be responsible for assuring the issuing of controlled documents generated or received onsite and for which plant personnel have the preparation and final approval or external interface responsibility. Similarly, the Manager of Management Systems shall be responsible for assuring the issuing of controlled documents generated or received at the home office for which home office personnel have preparation and final approval or external interface responsibility.

17.2.6.5 Processing and Retention Controls

Administrative procedures shall specify the requirements for the processing and maintenance of records. Procedures shall also be established to control the distribution of instructions, procedures, and drawings governed by the operating Quality program. WCGS staff and other KG&E organizations shall assure that current documents are distributed to and used at the location where the prescribed activity is performed. Clearly identified controlled copies of documents shall be used to perform an activity. |①

17.2.6.6 Procedure Review

The review by the Quality Branch of procedures which apply to maintenance, modifications and inspections will verify that needed inspections, the responsibility for performing the inspections, and documentation of the inspection results are provided for. The Quality Branch review will also verify that written procedures/instructions establish the inspection requirements, methods of inspection and acceptance criteria.

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17.2.7 CONTROL OF PURCHASED MATERIAL, EQUIPMENT, AND SERVICES

17.2.7.1 Scope

Materials, equipment, and services procured for the WCGS shall be required to conform to procurement documents as prescribed in Section 17.2.4. Provisions, including written procedures shall be established to control quality activities associated with the procurement of material, equipment, and services including:

1. The preparation, review, and change control of procurement documents as described in Section 17.2.4;
2. Procurement source evaluation and selection;
3. Bid evaluation and award;
4. Verification activities (surveillance, inspection, and audit) required by the purchaser;
5. Control of nonconformances as described in Section 17.2.15;
6. Corrective action regarding procurement as described in Section 17.2.16;
7. Material, equipment, and service acceptance;
8. Control of quality assurance records;
9. Audits of the procurement program as described in Section 17.2.18.

17.2.7.2 Source Evaluation and Selection

Provisions shall be made, as appropriate, for supplier evaluations which assess their capabilities prior to award by 1) source evaluation; 2) review for objective evidence of quality; or 3) a review of supplier history. When evaluations are performed, the assessment of a supplier's capability shall be specific regarding the procured item, commodity, or service and the supplier's ability to provide the items or services in accordance with procurement document requirements. The evaluation which provides the bases for supplier selection shall be documented and filed. Suppliers of hardware and services which are manufactured prior to award, considered an off-the-shelf item, or implemented under the KG&E operating Quality program or surveillance program may not require preaward source evaluation or audits to assure quality. (1)

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4. Items determined to be acceptable for use shall be tagged with an accept tag or other acceptable means of identification or segregation and released for storage or use. Conditionally accepting items by receiving inspection will be procedurally controlled.
5. Verifying that received items which do not conform to procurement documents are controlled and segregated (if practicable) and processed in accordance with Section 17.2.15.

17.2.7.9 Post-installation Testing

Acceptance by post-installation test may be utilized following one of the preceding verification methods. Post-installation testing shall be used as the prime means of acceptance verification when it is difficult to verify item quality characteristics, the item requires an integrated system checkout or test, or the item cannot demonstrate its ability to perform when not in use. Post-installation test requirements and acceptance documentation shall be established by KG&E. Post-installation testing shall be performed by plant personnel and, if required, shall be specified on procurement documents. 13

17.2.7.10 Acceptance of Procured Items and Services

Acceptance of items and services shall be based on one or more of the following: 13

1. Written certifications
2. Supplier audit or surveillance
3. Source inspection
4. Receiving inspection
5. Post-installation test

Where required by code, regulation or purchasing agreement, documented evidence that an item conforms to technical and quality requirements or procurement documents shall be available during receiving inspection or prior to use. Where not precluded by other requirements, documentary evidence may take the form of written Certificates of Conformance. Supplier's Certificates of Conformance are periodically evaluated by audits, independent inspections, or tests to assure they are valid. When acceptance is based on supplier audit or surveillance, documented evidence shall be furnished to the plant receiving organization by the responsible KG&E organization or their designated agent.

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17.2.13 HANDLING, STORAGE, AND SHIPPING

17.2.13.1 Scope

Safety-related items including parts of structures, systems, and components shall be handled, stored, shipped, cleaned, and preserved to assure that the quality of items is preserved from fabrication until incorporation into the WGS. 13

17.2.13.2 Procedural Control

Generic procedures shall be prepared for application to these activities; however, as appropriate, detailed procedures shall be prepared for the handling, cleaning, storing, maintaining while stored, packaging, or shipping of specific items or types of equipment or material.

Procedures shall provide instructions for the storage of materials and equipment to minimize the possibility of damage or lowering of quality from the time an item is stored upon receipt, until the time the item is removed from storage and placed in its final location. The manufacturers' recommendations are considered and generally are incorporated into storage instructions, however, relaxation of manufacturers' storage requirements may be implemented if an engineering evaluation determines that relaxation is justified because of unrealistic storage recommendations which are not reasonably necessary to preclude equipment degradation. Material and equipment shall be stored at locations which have a designated storage level. The various storage levels shall be procedurally defined and shall have prescribed environmental conditions. The storage conditions shall be in accordance with design and procurement requirements to preclude damage, loss, or deterioration due to harsh environmental conditions. Items having limited calendar or operating life shall be identified and controlled to preclude the use of items whose shelf life or operating life has expired.

17.2.13.3 Special Procedures

Procedures shall be prepared for all items that require special handling and shall be available prior to the time items are to be moved. Items not specifically addressed by procedures shall be handled in accordance with sound material handling practice. The movement of fuel assemblies to and in the reactor core shall be handled in accordance with the technical specifications. Other material handling activities may involve personnel from various plant organizations. Operators of special handling and lifting equipment shall be experienced or trained in the use of equipment.

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17.2.15 NONCONFORMING MATERIAL, PARTS, OR COMPONENTS

17.2.15.1 Scope

Nonconformances identified under the KG&E operating Quality program shall be controlled to prevent the inadvertent use of defective or indeterminate materials, parts, and components and to identify documentation inadequacies, and reportable activities. Nonconformances, therefore, include material deficiencies, malfunctioning or inoperative structures, systems and components, and departures from specified procedural requirements. Accordingly, measures shall be established regarding identification, documentation, status control, disposition, and notification of affected parties. |①

17.2.15.2 Nonconformance Controls

Nonconformances shall be reviewed and accepted, rejected, repaired, reworked, or conditionally released in accordance with documented procedures. Repaired and reworked items shall be reinspected in accordance with the original inspection or test requirements or acceptable alternatives. Reinspection results and operational data, gathered subsequent to repair or rework, are documented on nonconformance reports, inspection reports or other suitable type documents. Measures shall be established to conditionally release nonconforming items whose disposition is pending and an engineering evaluation indicates that further work or activity will not contribute adversely to the nonconformance or preclude identification and correction. Such dispositions shall be concurred in by the Quality Branch. Nonconformances shall be controlled by report documentation, tagging, marking, logging, or physical segregation.

Nonconformance documentation shall be processed in accordance with documented procedures and shall identify the specifics of the nonconformance. Nonconformance documentation shall state the particular drawing, procedure, specification, or other requirement not met; shall record the disposition; and shall register the signature of an appropriate approval authority. The WCGS staff, Nuclear Services, or Nuclear Plant Engineering, as applicable, shall be responsible for assuring the disposition of Nonconformance Reports (NCRs).

Procedures shall prescribe the individuals or groups assigned the responsibility and authority to approve the disposition of nonconformances. The disposition of nonconforming items shall be provided by the original design organization or by an equivalent organization which has access to the original design basis information. Within KG&E this includes engineers within the Nuclear Plant Engineering, Nuclear Services and Plant Staff organizations.

17.2.15.3 Reporting Methods

Under the KG&E operating Quality program, NCRs, audit reports, work requests, surveillance reports, and licensee event reports may be employed to identify and control nonconformances. Nonconformance logs may be utilized to identify and maintain the status of nonconformance documents. 10

Nonconformance Reports document nonconforming materials, parts, or components and documentation inadequacies. Licensee Event Reports, as required by Federal Regulations, shall be used to identify certain operating nonconformances. Nonconformance logs may be employed by the Quality Branch during the initial test program, and, subsequent to plant modifications, to track nonconformances requiring resolution. Nonconformances shall be reviewed for reporting applicability under 10 CFR 21.

17.2.15.4 Disposition

Material nonconformance disposition categories are:

1. "Use as is" or "acceptable"
(including conditional releases)
2. "Reject" or "not acceptable, repeat"
3. "Rework" in accordance with documented procedures
4. "Repair" in accordance with documented procedures.

17.2.15.5 Procurement Controls

Plant and other KG&E organization procedures shall prescribe measures for the control and disposition of KG&E purchased items and services identified by outside organizations as nonconforming. Procurement documents specify those nonconformances which shall be submitted to KG&E for approval of the recommended disposition. Actions taken in response to these nonconformances shall require documentation and shall be forwarded to KG&E along with the hardware and accompanying quality verification documentation. Plant personnel shall approve the recommended disposition of nonconformances relating to plant initiated hardware and services procurements. The technical support staff shall be responsible for assuring the processing of these supplier-recommended dispositions. Similarly, other KG&E or outside organizations shall approve or be requested to approve dispositions of nonconformances regarding procurements they initiate. An approved

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disposition of a nonconformance which allows a reduction in the requirements of a safety-related structure, system, or component shall be treated as a design change and, therefore, subject to the appropriate controls prescribed in Section 17.2.3.

17.2.15.6 Reportable Nonconformances

Results of investigations, recommendations, and event summaries regarding violations, deviations, and reportable events which are reported to the NRC in writing within 24 hours shall be reviewed by the PSRC and NSRC. | ③

17.2.15.7 Trend Analysis

Nonconformance reports shall be analyzed by the Quality Branch for identification of potential unsatisfactory quality trends. The results of these analyses shall be reported to management. Significant adverse trends shall be handled in accordance with Section 17.2.16.

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17.2.16 CORRECTIVE ACTION

17.2.16.1 Scope

Corrective action control measures shall be established to assure that conditions adverse to quality are promptly identified, reported, and corrected to preclude recurrence. Corrective action is necessary to correct omissions and problems in the operating Quality program. Corrective actions associated with the resolution of NCRs, audit, and surveillance findings are processed in accordance with Sections 17.2.15 and 17.2.18, respectively. ①

Significant conditions adverse to quality which impede the implementation or reduce the effectiveness of the program shall be controlled by the measures described herein. These conditions shall be reported to appropriate management, evaluated, and corrected. Significant adverse conditions may include an isolated gross noncompliance with procedural requirements, a recurring condition for which past corrective action has been ineffective, significant adverse nonconformance trends, or significant operating Quality program deficiencies. ①

17.2.16.2 Corrective Action Request (CAR)

Procedures shall provide instructions for identifying, reporting, and initiating corrective action to preclude recurrence of significant adverse conditions. A Corrective Action Request (CAR) shall be employed to document significant adverse conditions and to initiate the corrective actions for these conditions except in those instances when 10CFR21 reports, 10CFR50.55(e) reports or similar regulation required reports are prepared. ①

CARs shall be initiated by the Quality Branch. CARs are transmitted to the responsible KG&E manager. The manager shall identify the cause(s) of the deficiency, specify the action(s) necessary to correct the condition(s) and prevent recurrence, and provide or initiate the corrective action.

Nuclear Plant Engineering, Nuclear Services or the WCGS staff, as appropriate, shall review all significant conditions adverse to quality which involve design deficiencies or recommended corrective actions which require design change. In such cases the appropriate engineering organization shall be responsible for cause identification and recommending corrective action.

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Significant conditions adverse to quality, the cause of the condition, and the corrective action taken to preclude repetition shall be documented and reported to cognizant levels of management for review and assessment. The PSRC shall review all significant adverse conditions identified at the plant and shall recommend corrective action on significant conditions adverse to safety regarding operating procedures.

17.2.16.3 Close Out

The Quality Branch shall close out CARs by verifying the implementation and adequacy of corrective action. Copies of completed CARs shall be transmitted to appropriate levels of management to keep them apprised of significant conditions adverse to safety. The Quality Branch shall periodically prepare summaries of CARs and submit them to the NSRC and appropriate levels of management. | (3)

Close out of CARs shall be accomplished as promptly as practicable but will occur only after the effectiveness of the corrective action taken has been verified. Corrective action shall include the remedial action necessary to correct the deficiency as well as actions necessary to preclude recurrence. The nature of the deficiency may be such that remedial actions must be taken immediately, however, development, implementation and determination of the effectiveness of actions to preclude recurrence may take substantially longer.

17.2.16.4 10 CFR 21 Reports

Significant adverse conditions involving a defect or noncompliance in a delivered component or service which could create a substantial safety hazard shall be reported to the Nuclear Regulatory Commission pursuant to the requirements of 10 CFR 21. The PSRC shall review potentially reportable defects or noncompliance evaluations performed by the plant staff.

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17.2.17 QUALITY ASSURANCE RECORDS

17.2.17.1 Scope

A records system governing the collection, storage, and maintenance of records shall be established by KG&E and shall be in compliance with the standards and Regulatory Guides identified in Table 17.2-3. At a minimum, the records system shall apply to operating phase records associated with operating Quality program governed activities when records are required to either demonstrate compliance with licensing commitment or finished documentary evidence of the quality of items and activities affecting quality. All such records shall be considered QA records and shall be legible, complete, adequately identifiable to the item or activity involved and readily retrievable. ①

Quality Assurance records include but are not limited to operating logs; maintenance and modification procedures and inspection results; reportable occurrences; results of monitoring and reviews; inspections, tests, audits, and material analyses; qualification of personnel, procedures, and equipment; records required by Technical Specifications; and other documentation including drawings, specifications, procurement documents, nonconformance documentation, corrective action requests, procedures, and calibration procedures and reports required to demonstrate compliance with license commitments. ①

17.2.17.2 Responsibilities

A records system shall be established by the plant and other KG&E organizations and shall be controlled in accordance with written procedures. Implementing procedures shall address records administration; receipt of records; storage, preservation, and safekeeping of records; record retrieval; and the disposition of records in accordance with requirements identified in Table 17.2-3. The Manager Management Systems is responsible for assuring the handling and maintenance of Quality Assurance records generated, received, and stored at the home office. The Plant Manager shall provide for the administration of the Quality Assurance record system at the WCGS. The Quality Branch shall audit the home office and the WCGS Quality Assurance record storage systems to verify their effectiveness. ①

17.2.17.3 Records Index

The requirements for records administration shall specify that Quality Assurance records be listed in an index. The index shall be established prior to the receipt of records and shall indicate the location of records. Distributing and handling

17.2.18 AUDITS

17.2.18.1 Scope

A comprehensive audit program in compliance with ANSI N45.2.12 shall be established and implemented by KG&E to verify internal and external quality activity compliance with the operating Quality program. The audit program shall assure that applicable elements of the program have been developed, documented, and are being effectively implemented and shall provide for reporting and reviewing audit results by appropriate levels of management. The audit system is described in manuals and procedures. Nonconformances and program deficiencies shall be identified and corrective action shall be verified. 10

The KG&E audit system shall include the performance of audits and surveillances. Audits determine, through investigation, the adequacy of and adherence to established procedures, instructions, specifications, codes, and other applicable contractual and licensing requirements and the effectiveness of implementation. Surveillances are narrow scope investigations which include direct observation of activities affecting quality. Surveillances shall be conducted by Quality Branch personnel who may or may not be Lead Auditors, and may or may not include entrance and exit meetings. Surveillance activities are planned, conducted, documented, reported, followed-up, and closed out in accordance with written procedures.

17.2.18.2 Responsibilities

The Quality Branch shall establish a program which provides for the qualification and training of audit and surveillance personnel.

The Director Quality shall be responsible for assuring the implementation of a comprehensive system of planned audits to verify compliance with the operating Quality program. The Quality Branch has sufficient authority and organizational freedom to schedule and perform both internal and external audits, and has the organizational responsibility to measure and assure the overall effectiveness of the operating Quality program. The Quality Branch is independent of the economic pressures of production. The Director Quality has direct access to the Vice President - Nuclear for resolution of any areas in question. 10

The Manager Quality Assurance (WCGS) is responsible for assuring that the operating Quality program is being effectively implemented for onsite operating activities and shall direct full attention to this effort. He reports on the program effectiveness directly to the Director Quality. A communication 10

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path shall exist between the Manager Quality Assurance (WCGS) and the Plant Manager, thus providing a direct path to inform management regarding conditions affecting quality.

The Manager Quality Assurance (Home Office) is responsible for assuring that the operating Quality program is effectively implemented for offsite safety-related and special scope activities and directs full attention to their effort. He reports on the program effectiveness directly to the Director Quality. 10

A communication channel shall exist between the Manager Quality Assurance (Home Office) and the Nuclear Department home office management staff thus providing a direct path to inform them of conditions adversely affecting quality.

17.2.18.3 Auditor Qualifications

Audits shall be performed by qualified personnel. Auditors shall be trained individuals certified to meet internally designated personnel qualifications which assure his capability to direct an audit, perform an audit, report audit findings, and to evaluate corrective action. Other personnel may assist auditors in the conduct of audits, namely, technical specialists, management representatives, or auditors in training. Such personnel selected for auditing assignments shall have training or experience commensurate with the scope, complexity, or special nature of the activities to be audited. Personnel performing audits shall have no direct responsibility for the area audited. The auditor training program shall provide appropriate general orientation and specific training which develop competence for performing audits. Training records shall provide a history of auditor training, evaluations, recommendations, qualification certifications, and retraining.

Personnel in the Quality Branch shall be qualified as auditors in accordance with the requirements prescribed in the operating Quality program. Auditor qualification requirements shall include education or professional status, previous work experience and training, training received through KG&E, on-the-job performance and participation in audits as a trainee, and other performance factors applicable to auditing not defined by procedure. The qualification and certification of auditors shall be based on an evaluation of these factors by the Quality Branch. The maintenance of proficiency by auditors shall be accomplished by regular and active participation in the audit process or training, and a review of program, codes, standards, procedures, and other document revisions related to the operating Quality program and program auditing. The certification period shall not be finite. An auditor's qualification may be rescinded. The failure to maintain proficiency in the audit process shall be basis for revoking the qualification certification. In such cases, requalification shall be required. | ①

17.2.18.4 Audit Planning

The audit system shall include internal and external audits. The system shall be planned, documented, and conducted to assure coverage of the applicable elements of the operating Quality program, and overall coordination and scheduling of audit activities. The Quality Branch shall review the operating Quality program audit program annually to assure audits are being accomplished in accordance with the requirements described herein. | ①

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Audits shall be conducted using written plans in accordance with Quality Branch procedures. The procedures require evaluation of work areas, activities, processes, goods, services, and the review of documents and records for quality-related practices, procedures, and instructions to determine the effectiveness of the implementation of the operating Quality program and compliance to 10 CFR 50, Appendix B. The audit plan shall identify the audit scope, the requirements, the applicable documents, the schedule, and the written procedures or checklists as appropriate. The audit plan and any necessary reference documents shall be available to the audit team members. 10

17.2.18.5 Audit Frequency

Internal audits shall be conducted by the Quality Branch and shall be performed with a frequency commensurate with their safety significance. An audit of safety-related functions shall be completed in accordance with formal audit schedules within a period of two (2) years. Each element of the operating Quality program, such as design control and document control, and each area of plant operations shall be audited. 10

Supplementary to the biennial requirement to audit all safety-related functions, the following program elements shall be audited at the indicated frequencies:

1. The results of actions taken to correct deficiencies that affect nuclear safety and occur in facility equipment, structures, systems, or method of operation - at least once per six months.
2. The conformance of facility operation to provisions contained within the Technical Specifications and applicable license conditions - at least once per 12 months.
3. The performance, training, and qualifications of the facility staff - at least once per 12 months.

Audits shall also be conducted when (1) significant changes are made in functional areas of the operating Quality program, such as significant reorganization or procedure revisions; or (2) when it is suspected that the quality of the item is in jeopardy due to deficiencies in the quality assurance program; or (3) when a systematic, independent assessment of program effectiveness is considered necessary; or (4) when necessary to verify implementation of required corrective action. The NSRC shall review audit reports of onsite audits. The QAC 10

shall also periodically review the onsite audit program as developed by the Quality Branch to assure that audits are being performed in accordance with the requirements of the operating Quality program. Appropriate levels of management will be provided copies of internal and external audit reports. 10

17.2.18.6 Supplier Audits

External audits shall generally be conducted by the Quality Branch as a measure for the evaluation of procurement sources and as a postaward source verification of conformance to procurement documents. Audits conducted by other organizations, including other utilities or A/Es, may be employed as a means of postaward source verification in lieu of KG&E performed audits and may not audit specific items furnished to KG&E. Off-the-shelf items whose fulfillment of the technical and quality requirements are accepted by receiving inspection are exempt from the audit program. Similarly, other items which are not off-the-shelf but are relatively simple and standard in design and manufacture may not require postaward source verification audits to assure their quality.

Applicable elements of suppliers' quality assurance programs shall be audited (postaward) on a frequency that is based upon the status and importance to safety of the activities being performed. Audits are generally initiated when sufficient work is in progress to determine whether the organization is complying with the established quality provisions. Subsequent contracts or contract modifications which significantly enlarge the scope of activities by the same supplier shall be considered in establishing audit requirements.

Supplementary to or in lieu of audits, annual evaluations of suppliers may be performed which take into account, as applicable, (1) the review of supplier furnished documents such as certificates of conformance, nonconformance notices, and corrective actions; (2) results of previous source verifications, audits, and receiving inspections; (3) operating experience of identical or similar products furnished by the same supplier; and (4) results of audits from other sources.

17.2.18.7 Audit Team Composition

An audit team consists of one or more qualified persons. A qualified auditor shall be appointed audit team leader. The audit team leader shall be responsible for the written plans, checklists, team orientation, audit notification, preaudit conference, audit performance, postaudit conference, reporting, records, and follow-up activity to assure corrective

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action. Audit procedures shall require that conditions requiring immediate corrective action be reported promptly to the appropriate supervisor. Other findings shall be reported in a postaudit conference with team members and the audited organization, to discuss items. Formal audit reports shall be prepared and submitted to the audited organization within thirty days after the postaudit conference.

17.2.18.8 Audit Records

Records shall be retained by KG&E for activities associated with the requirements described herein. Records shall be collected, stored, and maintained in accordance with the requirements described in Section 17.2.17.

17.2.18.9 Audit Program Reviews

Audit results shall be periodically reviewed by the Quality Branch for quality trends and overall program effectiveness. The audit program shall be reviewed periodically by the QAC to assure that audits are being conducted and are effective in identifying problems, and to verify that appropriate actions are taken. Results of these reviews shall be reported to appropriate management in periodic summary reports of audit activities. | ②

TABLE 17.2-1

CONTROLLED PROCEDURE MANUALS

<u>Identification</u>	<u>Description</u>	<u>Approval</u>
Wolf Creek Project Policy Manual	A manual consisting of policies and directives which have applicability to all project personnel. The operating Quality program is described in this document. It covers the responsibilities and authority of each organization in the Nuclear Department and provides uniform direction to these organizations.	All sections of this manual will be reviewed and commented upon by the Division/Branch Heads. Approval and issuance of this manual and changes thereto will be by the Vice President-Nuclear.
Nuclear Department General Procedures	The general procedures are utilized to implement the requirements specified in the directives when two or more divisions/branches are involved. This reduces the need for duplicate division level procedures and provides common direction to the involved divisions/branches.	Reviewed and approved by affected division/branch managers and then by the Vice President - Nuclear.
Wolf Creek Generating Station Procedure Manuals	A multi-volume set of procedures prepared by the plant staff with the aid of the other SNUPPS utility, the Lead A/E, and the NSSS supplier. These procedures are divided into two areas, Operations and Startup. The Operations section of the Station Manual are controlled, issued and approved in accordance with the applicable procedural controls under the direction of the Plant Manager. The Startup section of the Station Manual is controlled, issued and approved in accordance	For the Operations Organization, all safety-related procedures and all revisions thereto shall be reviewed by the WCGS Plant Safety Review Committee (PSRC) or a subcommittee thereof. Final approval of all procedures and revisions to the Operating Organization procedures are made at the appropriate management level as outlined in the administrative procedures. For the Startup Organization, all preoperational test procedures, administrative procedures, and changes thereto are approved by the Joint Test Group (JTG) and the appropriate management level in accordance with the applicable administrative procedures.

TABLE 17.2-1a

CONTROLLED PROCEDURE MANUALS

<u>Identification</u>	<u>Description</u>	<u>Approval</u>
<p>Wolf Creek Generating Station Procedure Manuals (cont'd)</p>	<p>with the applicable procedural controls under the direction of the Startup Manager. These procedures implement the applicable commitments of the Wolf Creek Policy Manual for WCGS startup and operating activities except those of the Quality Branch. These manuals include administrative controls for the conduct of an efficient and orderly preoperational and start-up test program as well as the plant operating procedures.</p>	<p>Quality Branch personnel will review the administrative and inspection procedures contained in this manual and any revisions or changes thereto.</p>
<p>Quality Program Manual</p>	<p>The Manual that provides instruction to the Quality Branch for the definition and conduct of Branch responsibilities as described in the operating Quality program and assigned by the Wolf Creek Project Policy Manual. The Manual contains, primarily, responsibilities and requirements. Requirements of this Manual are implemented through the Quality Assurance Procedures Manual and the Quality Control Procedures Manual.</p>	<p>Approval and issuance of this Manual and changes thereto shall be by the Director Quality.</p>

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TABLE 17.2-2

OPERATING QUALITY PROGRAM IMPLEMENTING PROCEDURAL COVERAGE

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ACTIVITY	10 CFR 50, APPENDIX B
Station Operations (including nuclear fuel management and station operations, maintenance and modification control)	I, II, V, VI
Preparation, Review, Approval, and Revision of Operating Quality Program Manuals	I, II & VI
Preparation, Review, Approval, and Revision of Implementing Procedures	II, V &
Personnel Indoctrinations, Training and Qualification	II
Design Control (including control of design criteria, performance of design review and verification, and control of design interfaces)	III
Preparation, Review, Approval, and Revision of Specifications	III, IV & V
Preparation, Review, Approval, and Revision of Drawings	III & V
Preparation, Review, Approval, and Revision of Requisitions	III & IV
Preparation, Review, Approval, and Revision of Engineering Service Agreements	III
Design Change Control	III
Preparation, Review, Approval, and Revision of Contracts	IV
Document Control	VI
Bid Requests and Evaluation	VII

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TABLE 17.2-2 (sheet 2)

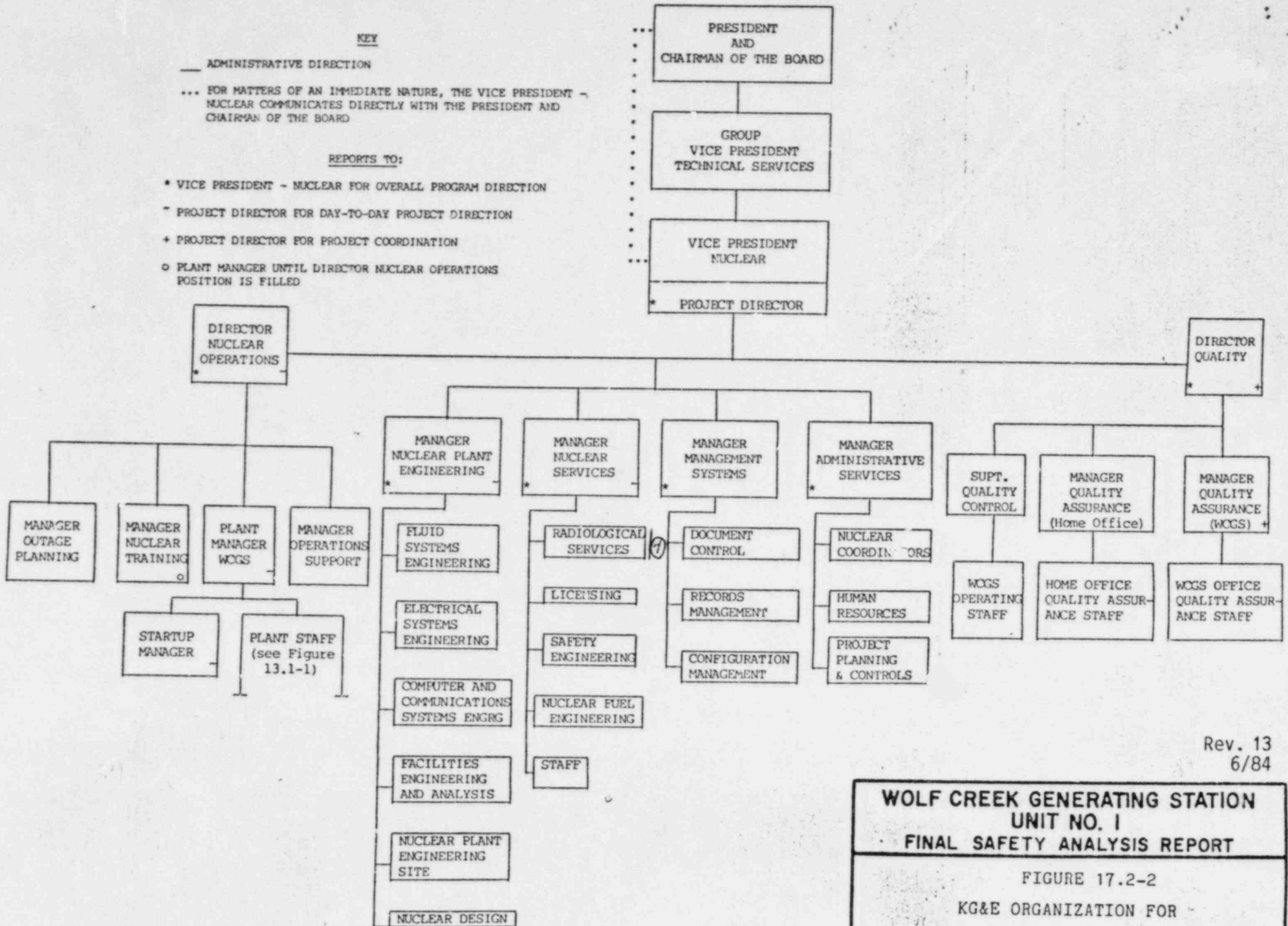
OPERATING QUALITY PROGRAM IMPLEMENTING PROCEDURAL COVERAGE

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ACTIVITY	10 CFR 50, APPENDIX B
Supplier Evaluation, Selection, and Control (including procurement change controls)	VII
Material Control (including receipt, identification, handling, storage, and shipping)	VIII & XIII
Special Process Controls	IX
Inspection Controls	X & XII
Test Control	XI & XII
Inspection, Test, and Operating Status	XIV
Nonconformance and Corrective Action Controls	XV & XVI
Receipt, Storage and Transfer of Records	XVII
Quality Program Audits and Evaluations	II & XVIII
Auditor Training and Qualifications	XVIII

KEY
 — ADMINISTRATIVE DIRECTION
 ... FOR MATTERS OF AN IMMEDIATE NATURE, THE VICE PRESIDENT - NUCLEAR COMMUNICATES DIRECTLY WITH THE PRESIDENT AND CHAIRMAN OF THE BOARD

REPORTS TO:
 * VICE PRESIDENT - NUCLEAR FOR OVERALL PROGRAM DIRECTION
 ~ PROJECT DIRECTOR FOR DAY-TO-DAY PROJECT DIRECTION
 + PROJECT DIRECTOR FOR PROJECT COORDINATION
 ○ PLANT MANAGER UNTIL DIRECTOR NUCLEAR OPERATIONS POSITION IS FILLED

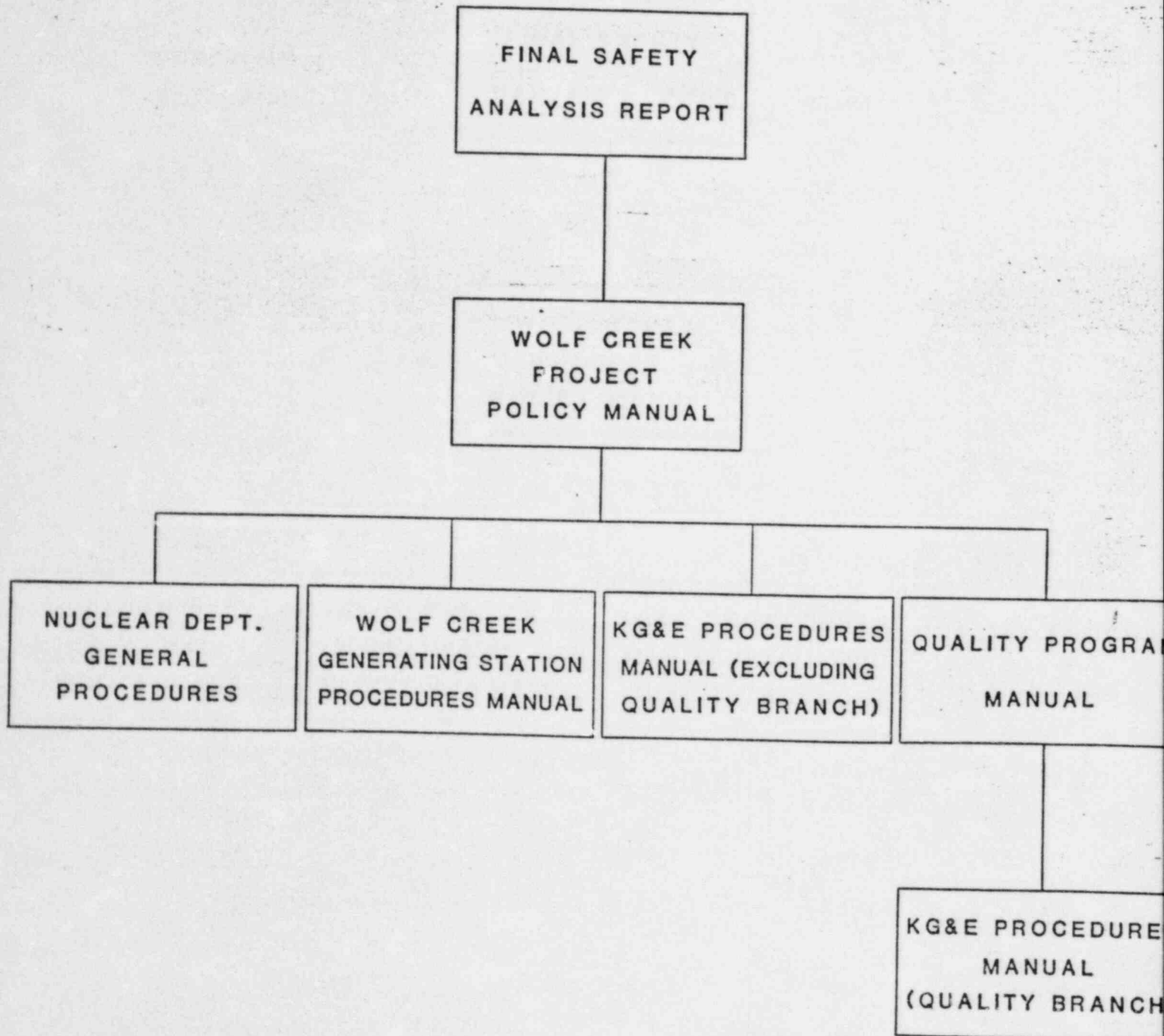


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 FINAL SAFETY ANALYSIS REPORT**

FIGURE 17.2-2
 KG&E ORGANIZATION FOR
 NUCLEAR OPERATIONS

CONTROLLED MANUAL FLOWCHART



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**WOLF CREEK GENERATING STATION
UNIT NO. 1
FINAL SAFETY ANALYSIS REPORT**

FIGURE 17.2-3

CONTROLLED MANUAL FLOWCHART

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