17.2 QUALITY ASSURANCE DURING THE OPERATIONS PHASE

17.2.0 INTRODUCTION

17.2.0.1 Scope

To maintain the high quality of plant systems and equipment during operation, maintenance, repair, modification, and refueling of the Duane Arnold Energy Center (DAEC), a comprehensive quality assurance program has been implemented. The objective of this program is to maintain managerial and administrative control over the operations of and activities relative to safety-related structures, systems, equipment, and components during the operating life of the DAEC. This program is designed to meet the intent of Appendix B to 10 CFR Part 50.

17.2.0.2 Corporate Policy

IES Utilities Inc. considers the operation of the DAEC to be an extension of the basic policies established and documented for design, construction, and startup.

The policies and procedures identified within this report regarding "operating phase" will form the basis for plant-life operation of the DAEC.

Where contractors and suppliers are used during the life of the operating DAEC, their function will be controlled by the Operational Quality Assurance Program.

It is the objective of IES Utilities Inc. that the DAEC shall be operated effectively, efficiently, and in such a manner as not to jeopardize the health or safety of the public.

17.2.1 ORGANIZATION

17.2.1.1 Scope

IES Utilities Inc. has established an operating organization that is structured to support DAEC operating requirements as well as meet corporate needs in other areas. This overall organization is described in UFSAR Chapter 13, Conduct of Operations, Section 13.1, Organizational Structure for IES Utilities Inc. The organization chart, which identifies both the "on-site" and "off-site" organizational elements that function under the cognizance of the quality assurance program, appears as Figure 13.1-1, IES Utilities Inc. Corporate Organization. Chapter 13 describes the quality assurance responsibilities of each of the organizational elements noted on the organization chart.

Additional detail concerning the Quality Assurance Department is presented in Chapter 17.2, Section 17.2.1.2.

The responsibility and authority for the establishment and execution of the Operational Quality Assurance Program for the operation of the DAEC will be retained by IES Utilities Inc.

17.2.1.2 Manager, Corporate Quality Assurance

The Manager, Corporate Quality Assurance reports to the Vice President - Nuclear and is assigned the primary responsibility for ensuring that quality requirements relative to the safe operation of the DAEC are identified and met.

Fulfilling the responsibilities of the Corporate Quality Assurance Department requires significant communication with the DAEC, the Nuclear Licensing Department, the Emergency Planning Department, the Nuclear Business Unit, the Engineering Department, the Training Department, and the Purchasing Department.

The Manager, Corporate Quality Assurance is responsible for preparing and maintaining the Operational Quality Assurance Program and the Quality Assurance Department implementing procedures.

The Manager, Corporate Quality Assurance is also responsible for evaluating the effectiveness of the Operational Quality Assurance Program and issuing periodic reports to the appropriate levels of management. Effectiveness of the Operational Quality Assurance Program at the DAEC is determined through internal audits and surveillances and through analysis and trending of reported conditions adverse to quality. The Manager, Corporate Quality Assurance also provides support for the procurement of materials and equipment through audits, surveillances, and evaluations of suppliers and contractors for quality capabilities and performance and maintains the list of approved suppliers for nuclear procurements.

Training responsibilities include the training of Quality Assurance Department personnel and Nuclear Generation Division personnel relative to the Operational Quality Assurance Program.

The Manager, Corporate Quality Assurance provides direct support to the nuclear Safety Committee and assures that Quality Assurance Department personnel are designated to support the Operations Committee.

17.2.1.2.1 Stop Work Authority

The Manager, Corporate Quality Assurance has the authority to issue a stop work instruction to the organization that has direct responsibility for the work. Only the Vice President - Nuclear has the authority to override the stop-work instruction.

17.2.2 OPERATIONAL QUALITY ASSURANCE PROGRAM

17.2.2.1 Scope

IES Utilities Inc. has established an Operational Quality Assurance Program that applies to those structures, systems, and components, that are safety-related and those activities that affect those structures, systems, and components that are safety-related. Safety-related structures, systems, and components are those that ensure the integrity of the reactor coolant pressure boundary, shut down the reactor, and maintain the reactor in a safe shut down condition, or prevent or mitigate the consequences of postulated accidents that could cause undue risk to the health and safety of the public.

17.2.2.2 Basis

10 CFR Part 50, Appendix B, Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants, and certain regulatory guides, form the basis for the Operational Quality Assurance Program. Appendix A to UFSAR Chapter 17.2 identifies the particular regulatory guides to which IES Utilities Inc. is committed and which are included in the basis for the Operational Quality Assurance Program.

17.2.2.3 Identification of Safety-Related Structures, Systems, Components and Items

The pertinent requirements of the Operational Quality Assurance Program apply to all activities affecting the safety-related functions of those structures, systems, and components that prevent or mitigate the consequences of postulated accidents that could cause undue risk to the health and safety of the public. A current list of safety-related structures, systems and components is contained in Section 3.2 of the DAEC Updated Final Safety Analysis Report. This list includes structures, systems, and components identified during the design and construction phase and may be modified as required during operations consistent with their importance to safety.

The list of safety-related structures, systems and components from Section 3.2 of the DAEC Updated Final Safety Analysis Report is further defined in data bases through the assignment of plant specific unique identifiers. These data bases include items in addition to safety-related structures, systems and components and are maintained by the Manager of Engineering.

17.2.2.4 Operational Quality Assurance Program Implementation

The implementation of the Operational Quality Assurance Program by IES Utilities Inc. is directed toward the assurance that operating phase activities and maintenance activities are conducted under controlled conditions and in compliance with applicable regulatory requirements, including 10 CFR Part 50, Appendix B. Management personnel responsible for the conduct of safety related activities are responsible for providing approved procedures before initiating the activity.

The IES Utilities Inc. Operational Quality Assurance Program is implemented via four levels of documents:

- Quality Assurance Manual
- Nuclear Generation Division Manual
- Departmental Procedures
- Departmental Instructions.

17.2.2.4.1 Quality Assurance Manual

The Quality Assurance Manual is the highest level internal quality program document that implements UFSAR/DAEC-1 Chapter 17.2, Quality Assurance During the Operations Phase. It is directed to those IES Utilities Inc. organizations responsible for safety-related activities. The Quality Assurance Manual presents upper management philosophy and concepts to the middle management level, defines organizational responsibilities, and identifies organizational interfaces.

17.2.2.4.2 Nuclear Generation Division Manual

The Nuclear Generation Division Manual contains administrative procedures that are common to the Nuclear Generation Division. These divisional administrative procedures eliminate the need for separate departmental procedures addressing the same subject.

17.2.2.4.3 Departmental Procedures

The Departmental Procedures are organizationally unique documents that describe the activities of each department within IES Utilities Inc. that has responsibilities for the operation, maintenance, or modification of the DAEC. The Departmental Procedures specify how to accomplish a specific activity.

17.2.2.4.4 Departmental Instructions

The Departmental Instructions are unique to the department and activity for which they have been prepared. Departmental Instructions provide the specific, detailed information necessary to perform an activity. Departmental Instructions are issued at the discretion of the responsible manager and are not required for all activities.

17.2.2.5 Control of IES Utilities Inc. Suppliers

IES Utilities Inc. may employ the services of architect-engineers, NSSS suppliers, fuel fabricators, constructors, and consultants to augment IES Utilities Inc. capabilities. These organizations are required to work under a quality assurance program to provide the control of quality activities consistent with the scope of their assigned work. The quality assurance programs of such organizations are subject to review, evaluation, and acceptance by the IES

Utilities Inc. Corporate Quality Assurance Department before the initiation of activities affected by the program.

17.2.2.6 Indoctrination and Training

The indoctrination, training, and retraining of personnel who participate in safety-related activities are provided in five broad areas: operator training, quality assurance indoctrination, technical training, radiation safety indoctrination and training, and emergency preparedness training.

The Operator training provided to senior reactor operators and reactor operators is under the cognizance of the Plant Manager, Nuclear, and the Manager, Nuclear Training.

The quality assurance indoctrination provided to IES Utilities Inc. personnel is under the cognizance of the Manager, Corporate Quality Assurance and the Manager, Nuclear Training.

The technical training provided to IES Utilities Inc. personnel is under the cognizance of the Manager of Engineering, the Plant Manager, Nuclear, and the Manager, Nuclear Training. The training may be provided in a number of ways, from self-study courses to formalized courses at the DAEC and educational institutions.

Indoctrination and training provided to IES Utilities Inc. personnel and contract personnel relative to performing work in areas that are potentially hazardous because of radioactivity are under the cognizance of the Radiation Protection Manager and the Manager, Nuclear Training.

The indoctrination and training provided to IES Utilities Inc. personnel and contract personnel relative to emergency preparedness is under the cognizance of the Manager, Emergency Planning.

17.2.2.7 Management Review and Audit

The status of the IES Utilities Inc. Operational Quality Assurance Program is periodically made known to management. A periodic report is prepared by the Manager, Corporate Quality Assurance and submitted to the Vice President - Nuclear.

An annual audit of the Operational Quality Assurance Program is conducted to evaluate the effectiveness of the overall program. Direction for these audits alternates between the Vice President - Nuclear and the Safety Committee. The Safety Committee audit is in accordance with the Technical Specifications requirement for a biennial audit of the quality assurance program. These alternating audits complement each other and provide an annual evaluation.

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 DAEC is controlled to ensure that appropriate measures are implemented and to ensure that "as-built" quality is not degraded. The plant design is defined by IES Utilities Inc., the NSSS supplier, architect/engineer, and selected suppliers. Design drawings and specifications illustrate the general arrangement and details of safety-related structures, systems, and components and define the requirements for ensuring their continuing capability to perform their intended operational or safety design function.

Design activities include the correct translation of regulatory requirements and design bases into specifications, drawings, written procedures, and instructions that define the design. Design analyses regarding reactor physics, stress, seismic, thermal, hydraulic, radiation, and accident analyses used to produce design output documents are performed when appropriate. Design verification is performed.

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

17.2.3.2 Design Responsibility

The design and engineering effort is the responsibility of the Manager of Engineering within the Nuclear Generation Division. Assistance may be provided by other engineering organizations; individuals providing that assistance are required to perform their activities in compliance with the IES Utilities Inc. Operational Quality Assurance Program. The design of nuclear fuel reloads is the responsibility of Reactor Engineering.

17.2.3.3 Design Criteria

Design requirements and changes thereto are identified, documented, reviewed, and approved to ensure the incorporation of appropriate quality standards in design documents. Design requirements and quality standards are 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 will consider, as a minimum, the design bases described in the UFSAR. All design criteria will be satisfied in the design.

17.2.3.4 Design Process Controls

The organization performing design will have the responsibility for design control unless specified otherwise. The control of design will be specified in procedures. These procedures will include instructions for defining typical design requirements; communicating needed design information across internal and external interfaces; preparing, reviewing, approving, releasing,

distributing, revising, and maintaining design documents; performing design reviews; and controlling field changes.

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

The design process establishes 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 are controlled through the use of written procedures that apply to the issuer, distributor, and user to prevent inadvertent use of superseded documents. Document control procedures 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 programs, the UFSAR when used as a design document, and drawings, including flow diagrams, piping and instrument diagrams, control logic diagrams, electrical single-line diagrams, structural systems for major facilities, site arrangements, and equipment locations.

17.2.3.5 Design Interface Control

Design interfaces with external and internal organizations participating in the design are controlled. The design interface measures ensure that the required design information is available in a timely fashion to the organization(s) responsible for the design.

17.2.3.6 Design Verification

The applicability of previously proven designs, with respect to meeting pertinent design inputs, including environmental conditions, will be verified for each application. Where the design of a particular structure, system, or component for a specific application has been subjected to a previous verification process, the verification process need not be duplicated for subsequent identical applications. However, the original design and verification will be documented and referenced for the subsequent application.

When changes to previously verified designs have been made, design verification will be required for the changes, including an evaluation of the effects of those changes on the overall design.

Design verification will be performed by competent individuals who:

- have not participated in the original design but may be from the same organizational entity,
- do not have immediate supervisory responsibility for the individual performing the design,

- have not specified a singular design approach,
- have not ruled out certain design considerations, and
- have not established the inputs for the particular design aspect being verified.

Under exceptional circumstances, the design verification may be performed by the originator's supervisor provided:

- the supervisor is the only technically qualified individual in the organization competent to perform the verification,
- the need is individually documented and approved in advance by the supervisor's management, and
- QA audits cover the frequency of occurrence and effectiveness of the supervisor as design verifier to guard against abuse.

Cursory supervisory reviews do not satisfy the intent of providing a design verification.
If errors or deficiencies in the design process are detected during the design verification cycle or during audits, resolution of errors and deficiencies will be the responsibility of the design engineer, who must provide documented evidence of resolution to the appropriate levels of management.

Acceptable verification methods include, but are not limited to, any one or a combination of the following:

1. Design reviews
2. Alternative or simplified calculational methods
3. Performance of suitable qualification testing.

The method selected will consider the item's complexity, previous operational experience, and importance to safety.

The results of the design verification efforts will be clearly documented, with the identification of the verifier clearly indicated and filed. The documentation of results will be auditable against the verification methods identified by the responsible design organization.

17.2.3.6.1 Design Reviews

Design reviews will be sufficient to verify the appropriateness of the design input, including assumptions, design bases and applicable regulations, codes and standards, and that the design is adequate for the intended application of the design.

Design reviews can range from multi-organization reviews to single-person reviews. The depth of review can range from a detailed check of the complete design to a limited check of the design approach, calculations, and results obtained.

17.2.3.6.2 Calculations

Alternative, simplified calculations can be made, or a check of the original calculations may be performed, to verify the correctness of the original calculation. Where computer programs are used, the program verification will be documented and the inputs shall be considered in the design review.

17.2.3.6.3 Qualification Testing

Design verification for some designs or specific design features may be achieved by suitable qualification testing of a prototype or initial production unit.

In those cases where the adequacy of a design is to be verified by a qualification test, the testing will be identified and documented. Testing will demonstrate the adequacy of performance under conditions that simulate the most adverse design conditions.

17.2.3.7 Changes To Design Documents

Changes to design documents receive a review and approval process as equivalent to original design documents. Design documents issued by the original architect-engineer, NSSS supplier, and other organizations may be changed and revised by the responsible design organizations within IES Utilities Inc. or contracted by IES Utilities Inc.

17.2.3.8 Independent Review Committees

Independent of the responsibilities of the design organization, the requirements of the Operations Committee and the Safety Committee, as specified in the Technical Specifications, will be satisfied.

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 DAEC. IES Utilities Inc. controls procurement documents by written procedures that establish requirements and assign responsibility for measures to ensure that applicable regulatory requirements, design bases, and other requirements necessary to ensure quality are included in documents employed for the procurement of safety related materials, parts, components, and services.

17.2.4.2 Procurement Responsibility

The responsibility for the initiation of a purchase requisition is that of the organization that ultimately has the responsibility for the procurement.

17.2.4.3 Quality Classification

Each item or service to be procured is evaluated by the Engineering Department to determine whether or not it performs a safety-related function or involves activities that 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 (that is, part of a safety-related structure, system, component, or service) is governed by the Operational Quality Assurance Program, an engineering evaluation will be conducted. The evaluation will classify the safety relationship of the service or questionable component parts or items of safety-related structures, systems, or components.

17.2.4.4 Quality Requirements in Procurement Documents

Procurement document control measures will ensure that appropriate regulatory requirements, design bases, and other requirements are included in the procurement process. Originating and reviewing organizations shall require that the following be included or invoked by reference in procurement documents, as appropriate:

1. Requirements that the supplier provide a description of his quality assurance program that implements the applicable criteria of 10 CFR Part 50, Appendix B, and that is appropriate for the particular type of item or service to be supplied. Certain items or services will require extensive controls throughout all stages of manufacture or performance, while others may require only a limited control effort in selected phases.

2. Basic administrative and technical requirements, including drawings, specifications, regulations, special instructions, applicable codes and industrial standards, and procedural requirements identified by titles and revision levels; special process instructions; test and examination requirements with corresponding acceptance criteria; and special requirements for activities such as designing, identifying, fabricating, cleaning, erecting, packaging, handling, shipping, and storing.

3. Requirements for supplier surveillance, audit, and inspection, including provisions for IES Utilities Inc. access to facilities and records and for the identification of witness and hold points.

4. Requirements for extending applicable requirements to lower-tier suppliers and subcontractors. These requirements will include right-of access by IES Utilities Inc. to sub-supplier facilities and records.

5. Requirements for the supplier to report certain nonconformances to procurement document requirements and conditions of their disposition.

6. Documentation requirements, including records to be prepared, maintained, submitted, or made available for review, such as drawings, specifications, procedures, procurement documents, inspection and test records, personnel and procedural qualifications, chemical and physical test results, and instructions for the retention and disposition of records.

7. Requirements for supplier-furnished records.

8. Applicability of the provisions of 10 CFR Part 21 for safety-related items, to the extent that a loss of their function may cause potential substantial safety hazards. Certain items, as off-the-shelf items, will be exempt from this requirement.

9. Requirements for packaging and transportation as necessary to prevent degradation during transit.

17.2.4.5 Acquisition from Other Licensed Nuclear Power Plants

Items may be procured from another NRC-licensed nuclear power plant provided that the procured item meets the requirements of the DAEC procurement specification. If the item was originally procured by the other utility as a "basic component" as defined in 10 CFR Part 21, then the reporting requirements of the regulation are accepted by IES Utilities Inc. IES Utilities Inc. shall notify the original supplier in writing of this item(s) change in ownership to give the original supplier the opportunity to change the 10 CFR Part 21 notification records.

17.2.5 **INSTRUCTIONS, PROCEDURES, AND DRAWINGS**

17.2.5.1 Scope

Instructions, procedures, and drawings will be generated to provide direction and guidance to ensure that safety-related activities are performed correctly. The need for, content of, and depth of detail of the instructions, procedures, and drawings will be consistent with the importance and complexity of that activity.

17.2.5.2 Content

The content of the instructions, procedures, and drawings will be appropriate to the activities being performed.

Instructions and procedures will include, as appropriate, scope or purpose, responsibilities of individuals performing the work, the information needed, and required output and acceptance criteria.

Drawings will be prepared using industrially accepted standards.

17.2.5.3 Compliance

Following approval and issuance of instructions, procedures and drawings, respective activities will be performed in accordance with the documents. If an activity cannot be accomplished due to an inadequacy of the document, the document will be formally revised to reflect the manner in which the activity is to be performed.

17.2.6 **DOCUMENT CONTROL**

17.2.6.1 Scope

The organization responsible for the documents will establish measures to ensure that the documents, including changes, are reviewed for adequacy and are approved for release by authorized personnel. The responsible organization also establishes measures to ensure the documents are distributed to and used at the location where the prescribed activity is performed and are controlled.

17.2.6.2 Preparation

Administrative techniques will be established that define the documents to be issued and controlled, identify the current revision or issue of the document, and identify the individuals who are to receive the document.

17.6.2.3 Review and Approval

Documents that are specified as being controlled documents are reviewed to ensure that regulatory, technical, and quality assurance requirements have been appropriately addressed; that review comments have been considered and resolved; and that the document is approved before issuance and use.

The review and approvals required for instructions, procedures and drawings will be established by the organization responsible for those documents. Reviews will be performed by knowledgeable personnel other than the originator. Review and approval will occur prior to issuance or implementation of the changed document.

17.2.6.4 Distribution and Use

Documents will be issued before the commencement of the activity to be controlled by that document. The mechanism for distribution will provide assurance that the controlled document arrives at the point of use; the user will provide assurance that the document to be used is the proper document and revision.

When formal distribution lists are used to prescribe an established distribution, they will be maintained current to reflect changes in assigned responsibilities.

Document transmittals will be reviewed for accuracy and dated and made suitable for transmittal. The recipient is informed of what is being transmitted and of the status of the documents being transmitted.

An acknowledgment of the receipt of controlled documents by recipients may be required if the organization responsible for the document deems such controls necessary.

The organization responsible for the use of the document will establish administrative controls to provide for positive identification and prevent the loss of such documents. The administrative controls will have provisions to remove obsolete documents, thereby precluding the possibility that the wrong documents or revisions will be used.

17.2.6.5 Changes to Documents

Changes to documents previously released will be reviewed, approved, dated, and distributed in the same manner as the original document.

Personnel who review changed documents will have access to pertinent background information upon which to base their approval. Reviewers shall have adequate understanding of the requirements and the intent of the original documents, including source documentation. Revisions will be reviewed and approved by the same organizations that performed the original review and approval unless another qualified organization is designated.

Revised instructions and procedures will reflect the new revision and date and clearly identify the scope or portion of the instruction and procedure being changed.

Documents that have been approved by the original designers of the DAEC will be revised by the IES Utilities Inc. Engineering Department.

17.2.7 CONTROL OF PURCHASED MATERIAL, EQUIPMENT, AND SERVICES

17.2.7.1 Scope

Purchased material, equipment, and services are controlled to ensure that the specified technical and quality requirements are obtained. The responsibility for the control of purchased material, equipment, and services is that of the Corporate Quality Assurance Department in close cooperation with the Engineering Department, DAEC, and the Purchasing Department. The technique used for the control of purchased material, equipment and services includes, as appropriate, source evaluation and selection, objective evidence of quality furnished, inspection at the source, supplier's history of providing a satisfactory product, and examination of the product on delivery.

17.2.7.2 Source Evaluation and Selection

Potential suppliers are evaluated. These evaluations are performed by qualified personnel to determine the capability of the supplier to provide the items or services.

Suppliers are evaluated on the basis of one or more of the following:

1. Capability to comply with the requirements of 10 CFR 50, Appendix B, applicable to the type of material, equipment, or service being procured.

2. Past records and performance for similar procurements to ascertain the capability of supplying a manufactured product or services under an acceptable quality assurance system.

3. Audits or surveys of supplier's facilities and quality assurance program to determine the capability to supply a product that satisfies the design, manufacturing, and quality requirements.

4. The certification of the supplier by the ASME.

5. The results of audits performed by other utilities and consultants.

The supplier's bid proposal is reviewed and evaluated to ensure that the bid is responsive to the procurement documents.

Depending on the importance of the item or service and its importance to safety, a post-award meeting may be held to discuss the requirements of the procurement document.

17.2.7.3 Inspection or Surveillance at the Source

Subsequent to the award of a purchase order, a surveillance/inspection plan may be prepared. The extent of the plan will consider the complexity and importance of the item or service, supplier's past performance, and those aspects of the manufacturing process that may not be verified at receipt inspection.

The plan will establish, as appropriate, the frequency of surveillance/inspection; processes to be witnessed, inspected, or verified; the method of surveillance/inspection; and documentation requirements.

Activities specified in the plan will be conducted at the supplier's facilities by qualified personnel using approved procedures that provide for the following as applicable:

1. Reviewing material acceptability

2. Witnessing in-process inspections, tests, and nondestructive examination

3. Reviewing the qualification of procedures, equipment, and personnel

4. Verifying that fabrication or construction procedures and processes have been approved and are properly applied

5. Verifying quality assurance/quality control systems, to the extent necessary

6. Reviewing document packages for compliance to procurement document requirements, including qualifications, process records, and inspection and test records

7. Reviewing Certificates of Compliance for adequacy.

8. Verifying that nonconformances have been properly controlled.

Hold points specified in the procurement document will be complied with and IES Utilities Inc. will be notified in a timely manner when hold points are reached.

A method will be established to provide information relative to the characteristics that have been inspected at the source and the characteristics that are to be inspected on receipt.

17.2.7.4 Receipt Inspection

Items purchased by IES Utilities Inc. are controlled at the final destination by the performance of a receipt inspection. The extent of the receipt inspection depends on the importance to safety, the complexity, the quantity of the product or service, and the extent of source inspection, source surveillance or audit that was performed.

Receipt inspection is performed by trained and qualified personnel in accordance with approved procedures and acceptance criteria before the installation or use of the item(s) to preclude the placement or use of nonconforming item(s).

Documentary evidence will demonstrate that materials and equipment conform to the procurement requirements.

If receipt inspection indicates that the item is unacceptable, the item is treated as nonconforming.

17.2.7.5 Post-installation Testing

Acceptance by post-installation test may be used following one of the preceding verification methods. Post-installation testing is used as the prime means of acceptance verification when it is difficult to verify item quality characteristics, the item requires an integrated system check out or test, or the item cannot demonstrate its ability to perform when not in use. Post-

installation test requirements and acceptance documentation are established by IES Utilities Inc.

17.2.8 IDENTIFICATION AND CONTROL OF MATERIALS, PARTS, AND COMPONENTS

17.2.8.1 Scope

Materials, parts, and components will be identified and controlled to ensure that the correct materials, parts, and components are used during fabrication, manufacture, modification, repair, and replacement.

It is the responsibility of the organization responsible for the engineering design and procurement to include the requirements for proper identification and control in the procurement documents.

It is the responsibility of the supplier for maintaining the traceability of materials, parts, and components throughout fabrication and shipment.

It is the responsibility of the DAEC for maintaining the traceability of materials, parts, and components throughout repair, replacement, modification, and installation.

17.2.8.2 Identification

Identification will be applied in locations and by methods that will not affect the fit, function, or quality of the item.

The identification of the item will be maintained by a unique method such as heat number, part number, serial number, batch number, or other appropriate means in a form that is durable and legible.

The identification may be on the item or on records traceable to the item. Where feasible, direct placement of the identification on the item will be by stamping, marking, tags, labels, or other similar methods.

Where direct placement of identification on the item is not feasible, proper controls will be established that ensure direct positive identification of the item. Where physical identification is either impractical or insufficient, physical separation, procedural control, or other approved means will be employed.

Receipt inspection will verify that identification for received items is complete and accompanied by appropriate documentation.

When an item is subdivided, the identification will be immediately transferred to the sub-parts so that all sub-parts contain the appropriate identification label.

Any identification that will be obliterated or hidden by surface coatings or surface treatments will be reestablished or will be traceable by administrative means.

Standard catalog items or off-the-shelf items may be identified by catalog number or other appropriate designation.

17.2.8.3 Verification and Control

The items will be controlled and the identity of the item verified.

Inventory and storage controls will be established at the DAEC to ensure proper traceability of items.

The correctness of the item will be verified on withdrawal from storage and before the initiation of the repair, replacement, and modification.

17.2.9 CONTROL OF SPECIAL PROCESSES

17.2.9.1 Scope

Special processes are those controlled fabrications, tests, and final preparation processes that require the qualification of procedure, technique, and personnel and that are performed in accordance with applicable codes and standards. Certain special processes require interim in-process controls in addition to final inspection to ensure quality.

The control of special processes is the joint responsibility of the Engineering Department, the DAEC, and the Corporate Quality Assurance Department.

The Engineering Department is responsible for providing technical expertise relative to materials, metallurgy, welding, brazing, special processes and nondestructive examination (NDE). Nondestructive examinations will be performed under the direction of the Engineering Department by personnel independent of the activity and qualified in accordance with SNT-TC-IA.

17.2.9.2 General Requirements

Measures will be established to ensure that special processes are controlled and accomplished by qualified personnel using qualified procedures in accordance with applicable codes, standards, specifications, criteria, and other special requirements.

Written procedures will be reviewed or prepared before use to ensure that special processes are controlled and accomplished.

These procedures will describe the operations to be performed, the sequence of operations, the characteristics involved, the limits of these characteristics, measuring and test equipment to be used, acceptance criteria, and documentation requirements.

Special processes will be accomplished in accordance with written procedures and process sheets, or their equivalent.

Personnel will be trained and qualified in accordance with applicable codes and standards.

Equipment used to perform special processes or measure or test the product will be qualified, before use, in accordance with applicable codes, standards, specifications, or procedures.

The extent and period of training, qualification, and testing of personnel and equipment will be in accordance with applicable codes, standards, specifications, or procedures.

17.2.9.3 Personnel Qualification

The personnel who perform nondestructive examinations will be certified to the precise technique to be used and for the proper level of expertise.

A Level III Examiner will be responsible for qualifying and certifying, in accordance with the IES Utilities Inc. written practice, the IES Utilities Inc. personnel who perform nondestructive examinations.

17.2.9.4 Verification and Control

The procedures, process sheets, personnel, and equipment will be verified as appropriate, before the initiation of work at the DAEC.

The Corporate Quality Assurance Department will determine that suppliers performing special processes at the DAEC have sufficient controls before the initiation of the work.

The Engineering Department will determine that personnel performing special processes have current qualifications.

17.2.9.5 Special Protective Coatings (Paint)

The application of a special protective coating shall be controlled as a special process when the failure (i.e. peeling or spalling) of the coating to adhere to the substrate can cause the malfunction of a safety-related structure, system or component. Special process coatings shall be applied by qualified personnel using qualified materials and equipment, and approved procedures. Documentation shall include identification of the following:

- person applying the coating (and qualification)

- material used
- procedure used (and qualifying procedure if different)
- tests performed and results
- date of application of coating
- traceability of coating location.

17.2.10 **INSPECTION**

17.2.10.1 Scope

A program for the inspection of safety-related activities at the DAEC will be established and executed to verify conformance with applicable documented instructions, procedures, drawings, and specifications.

The responsibility for the receipt, in-process and final inspection of materials, parts, and components affecting quality is that of the Maintenance Department. The responsibility for the performance of nondestructive examinations is that of the Engineering Department.

17.2.10.2 General Requirements

A program for the inspection of activities affecting quality will be established and executed by or for the organization performing the activity to verify conformance with the documented instructions, procedures, and drawings for accomplishing the activity.

Inspection will be performed by individuals other than those who performed the activity being inspected. Inspections will be performed by personnel using appropriate equipment in accordance with applicable codes, standards, and procedures.

Procedures, instructions, or checklists will be established and used that identify the characteristics to be inspected, inspection methods, special devices, acceptance and rejection criteria, methods for recording inspection results, and groups responsible for the inspection. Special preparation, cleaning, and the use of measuring devices will be included.

Inspections will be planned to identify where in the sequence of work each inspection activity will be performed, to what extent, procedures to be used, and mandatory hold or witness points.

Repairs, modifications, or replacements will be inspected in accordance with the original inspection requirements or acceptable alternatives.

Sampling methods and process monitoring will be used when inspection is impossible or disadvantageous.

17.2.10.3 Process Monitoring

Process monitoring of work activities, equipment, and personnel will be used as a control if inspection of processed items is impossible or disadvantageous. Both inspection and process monitoring will be provided when control is inadequate without both. As an alternative, a suitable level of confidence in structures, systems, or components on which maintenance or modifications have been performed will be attained by inspection. As appropriate, an augmented inspection program will be implemented until such time as a suitable level of performance has been demonstrated.

The monitoring of processes will be performed to verify that activities affecting quality are being performed in accordance with documented instructions, procedures, drawings, and specifications.

17.2.10.4 In-Service Inspection

Required in-service inspection, including nondestructive examination, pressure tests, and in-service tests of pumps and valves, will be planned and executed. The results of these examinations and tests shall be documented, including corrective actions required and the actions taken.

The basis for the in-service inspection program is the ASME Boiler and Pressure Vessel Code, Section XI, 1980 Edition with Addenda through Winter 1981. The specific issue and addendum of requirements beyond the base commitment is as specified in 10 CFR Part 50, Section 50.55a(g), except where specific exemptions have been granted by the NRC.

The Engineering Department has the overall responsibility for developing the inspection program, for ensuring compliance with the ASME Code Section XI rules, and for evaluating the inspection results. The inspection plans shall be updated as required to accommodate the as-built condition of the DAEC.

17.2.10.4.1 Ten Year Inspection Program

The Ten-Year Inspection Program includes inspections and tests of those pressure boundary welds and materials as defined in ASME Boiler and Pressure Vessel Code, Section XI. Also included are the pressure boundary welds and materials that are defined as "Augmented" in-service inspections. The Ten-Year Inspection Program identifies the welds and items to be examined, the frequency of such examinations, the methods, and confirms the continuing acceptability of the selected welds and items.

The Engineering Department has the responsibility for conducting the planned nondestructive examinations (NDE) and providing the services of the Corporate NDE Level III Examiner as required by Code.

17.2.10.4.2 In-service Testing Program

The DAEC has the responsibility for conducting the ASME Boiler and Pressure Vessel Code, Section XI, pump and valve tests, system pressure tests, and snubber tests. These performance tests to verify operational readiness are part of the plant performance program.

17.2.10.5 Personnel Qualification

Personnel performing inspections and examinations, or accepting the results of inspections and examinations, will be trained and qualified in accordance with governing codes, standards, and regulations. The personnel will be competent and cognizant of the technical requirements of the work activity. Qualification records will be maintained by the organization responsible for the individual(s) performing the inspections.

17.2.10.6 Documentation and Records

Inspection and examination activities will be reported on a form that indicates the date of the activity, identification of inspector or examiner, and rejection or acceptance of the item(s).

17.2.11 **TEST CONTROL**

17.2.11.1 Scope

Testing will be performed at the DAEC to demonstrate that safety-related structures, systems, and components perform satisfactorily in service. The testing program will include the following, as appropriate:

1. Qualification tests for design verification
2. Proof tests before installation
3. Pre-Operational tests
4. Operational tests.

17.2.11.2 General Requirements

The tests will be performed in accordance with approved written test procedures that incorporate the requirements and acceptance limits. The test procedure will identify the item to be tested and the purpose of the test.

Test procedures will include provisions for ensuring that all prerequisites for the given test have been met, that adequate test instrumentation is available and used, and that the test is

performed under suitable environmental conditions. The test procedure will incorporate directly, or by reference, the following requirements:

1. Performance of tests by trained personnel who are qualified in accordance with applicable codes and standards

2. Verification of test prerequisites

3. Identification and description of acceptance or rejection criteria

4. Instructions for performing the test.

17.2.11.3 Surveillance Testing

Provisions will be established for the performance of surveillance testing to ensure that the necessary quality of systems and components is maintained, that facility operations are within the safety limits, and that limiting conditions of operation can be met. The testing frequency will be at least as frequent as prescribed in the Technical Specifications. The provisions for surveillance testing will include the preparation of schedules that reflect the status of planned surveillance tests. Qualified plant staff will perform surveillance tests.

17.2.11.4 Personnel Qualification

Personnel performing testing will be trained and qualified. The personnel will be competent and cognizant of the technical requirements of the work activity.

17.2.11.5 Documentation and Records

Test procedures and results will be documented and approved by qualified personnel.

Test results shall be documented and indicate that the prerequisites and other test requirements have been met.

17.2.12 CONTROL OF MEASURING AND TEST EQUIPMENT

17.2.12.1 Scope

The responsibility for the control of measuring and test equipment and permanently installed plant instrumentation, is that of the DAEC. The control measures will include the identification and calibration of the equipment to the activity. The requirements contained within this section do not apply to devices for which normal industry practice provides adequate control, that is, tape measures, rulers, and measuring glasses.

17.2.12.2 General Requirements

Measures will be established for the control, calibration, and adjustment of measuring and testing devices.

Calibration intervals will be based on required accuracy, the use of equipment, stability characteristics, or other factors affecting the measurement.

The following requirements will be specified in written procedures that are used to control measuring and test equipment:

1. Identification of equipment and traceability to calibration data

2. Calibration methods, frequency, maintenance, and control

3. Labeling and marking of portable equipment to indicate due date for next calibration. Due dates for permanently installed plant equipment are controlled by means of a central record system.

4. Provisions for determining the validity of previous measurements when equipment is determined to be out of calibration.

5. Traceability of reference and transfer standards to nationally recognized standards. When national standards do not exist, the basis for calibration shall be documented.

Calibration may be performed at the DAEC or by qualified laboratories using competent personnel.

Equipment that is consistently found to be out of calibration shall be repaired or replaced.

When the accuracy of the measuring or test device can be adversely affected by environmental conditions, special controls will be prescribed to minimize such effects.

17.2.12.3 Traceability

The measuring and test equipment will be traceable to the item on which the equipment has been used.

When calibration, testing, or other measuring devices are found to be out of calibration, an evaluation shall be made and documented concerning the validity of previous tests and the acceptability of devices previously tested from the time of the previous calibration.

17.2.13 HANDLING, STORAGE, AND SHIPPING

17.2.13.1 Scope

The handling, storage, shipping, cleaning, and preservation of material and equipment will be controlled to prevent damage, deterioration, and loss.

It is the responsibility of the organization initiating procurement to specify any special instructions and requirements for packaging and handling, shipping, and extended storage.

It is the responsibility of the DAEC to provide for the proper handling and storage of material and equipment upon receipt and throughout repair, replacement, and modification.

17.2.13.2 General Requirements

Measures will be established to control the handling, storage, shipping, cleaning, and preservation of material and equipment in accordance with work and inspection instructions to prevent damage or deterioration.

When necessary for particular products, special protective environments such as inert gas atmosphere, temperature levels, and specific moisture-content levels will be specified and provided.

Consistent with the need for preservation, material and equipment will be suitably cleaned to prevent contamination and degradation. The cleaning method selected will in itself not damage or contaminate the material or equipment.

17.2.13.3 Shipping

When required to prevent contamination or to prevent damage during shipment, special packaging methods will be specified and implemented.

Special-handling requirements, if required, will be specified in the shipping instructions. The package should be appropriately marked to indicate that special handling or storage requirements are necessary.

Markings of packages will conform to applicable Federal and state regulations.

17.2.13.4 Radioactive Materials

Measures will also be established to control the shipping of licensed radioactive materials in accordance with 10 CFR Part 71. These measures will apply to the use of shipping containers only, and not to the design and fabrication of shipping containers for which an NRC certification is required under Part 71.

17.2.13.5 Handling

The requirements for special handling will be considered when the item is moved from the receipt point to the storage area and from the storage area to the point of use. Special-handling equipment will be periodically tested and inspected.

17.2.13.6 Storage

Materials and equipment will be stored to minimize the possibility of damage or lowering of quality from the time an item is stored on receipt until the time the item is removed from storage.

The manufacturers' recommendations are considered; however, the relaxation of manufacturers' storage requirements may be implemented if the storage recommendations are not reasonably necessary to preclude equipment degradation. Material and equipment will be stored at locations that have a designated storage level. The various storage levels will be defined and will have prescribed environmental conditions. The storage conditions will be in accordance with design and procurement requirements to preclude damage, loss or deterioration due to harsh environmental conditions. Items having limited shelf life will be identified and controlled to preclude the use of items whose shelf life has expired.

17.2.14 INSPECTION, TEST, AND OPERATING STATUS

17.2.14.1 Scope

Measures will be established to ensure that necessary inspections of items have not been inadvertently bypassed or that systems or components are not inadvertently operated.

17.2.14.2 General Requirements

Measures will be established to indicate, by the use of marking such as stamps, tags, labels, routing cards, log books, or other suitable means, the status of inspection, test and operating status of individual structures, systems, or components.

Procedures will provide for controls to preclude the inadvertent use of nonconforming, inoperative, or malfunctioning structures, systems, or components.

The procedures will include the following:

1. Identification of authority for application and removal of status indicators

2. The use of specific status indicators

3. Provisions for maintaining the status of the structures, systems, or components until removed by an appropriate authority.

17.2.14.3 Inspection and Test Status

Measures will be established to provide for the identification of items that have satisfactorily passed required inspections and tests.

Only items that have passed inspection or testing will be used in the manufacture or installation of an item.

Documented procedure requirements will include the following:

1. Maintenance of the status of the item throughout fabrication and installation

2. Use of status indicators such as stamps, tags, markings, or labels either on the items or on documents traceable to the items

3. Provisions for controlling the bypassing of required inspections, tests, and other critical operations.

Items at the DAEC will be identified by status indicators to indicate whether they are awaiting inspection, acceptable for use, unacceptable, or in a hold status pending further evaluation.

17.2.14.4. Operating Status

Procedures relating to the operational status of safety-related structures, systems, and components, including temporary modifications, will include the following:

1. Authorization for requesting that equipment be removed from service

2. Checks that must be made before approving the request

3. Approval of the action to remove the equipment from service

4. The actions necessary to isolate the equipment and responsibility for performing these actions

5. The actions necessary to return the equipment to its operating status and responsibility for these actions.

Equipment and systems in a controlled status will be identified. Plant procedures will establish controls to identify the status of inspection and test activities associated with maintenance, instrumentation, and control system calibration and testing. The status of nonconforming,

inoperative, or malfunctioning structures, systems, and components will be documented and identified to prevent inadvertent use.

The Technical Specifications establish the status required for safe plant operation, including provisions for periodic and non-periodic tests and inspections, of various structures, systems, and components. Periodic tests may be operational tests or tests following maintenance, and non-periodic tests may be made following repairs or modifications.

17.2.14.5 Sequence Change Control

Procedures will include the control of the sequence of required tests, inspections, and other operations when important to safety. To change these controls, the individual procedure must be changed, which requires the same review and approval cycle as that which authorized the original procedure.

17.2.15 NONCONFORMING MATERIALS, PARTS, OR COMPONENTS

17.2.15.1 Scope

The nonconformance reporting system is established to control materials, parts or components which do not conform to requirements in order to prevent their inadvertent use or installation. Nonconforming materials, parts or components shall be identified, documented and segregated, and notification shall be provided to affected organizations. The responsibility for the disposition of the nonconforming materials, parts, or components is that of the Engineering Department, DAEC, and the Corporate Quality Assurance Department.

17.2.15.2 Identification and Segregation

The identification and segregation will be sufficient to prevent inadvertent use or installation of the nonconforming item. Material, parts, or components for which nonconformances have been identified will be immediately segregated, when practical, in areas that are reserved for nonconforming items. When segregation is impractical, administrative measures will be used, such as tagging, roping off the area, etc.

17.2.15.3 Reporting and Disposition

The reporting mechanism will provide the means to disposition the nonconforming material, part, or component.

The nonconformance report will identify the item, describe the nonconformance, and contain sufficient information to evaluate the nonconformance. The nonconformance report will be transmitted to the proper organization(s) for evaluation and disposition.

17.2.15.4 Disposition

The disposition will be limited to one of the following: use-as-is, rework to original requirements, repair to an acceptable condition, or reject.

For disposition of use-as-is and repair, a technical justification will provide assurance that the item will function as originally intended.

Items that are to be repaired or reworked will be required to be reinspected or retested to determine that the original or new acceptance criteria have been satisfied.

17.2.16 CORRECTIVE ACTION

17.2.16.1 Scope

Corrective action control measures will be established to ensure that conditions adverse to quality are promptly identified, reported, and corrected.

17.2.16.2 Conditions Adverse to Quality

Conditions adverse to quality such as failures, malfunctions, deficiencies, deviations, defective material and equipment, nonconformances, and abnormal occurrences will be promptly identified and corrected.

The Nuclear Licensing Department is the responsible for administration of the Corrective Action Program. Administrative responsibilities include receipt, tracking, assignment of actions to appropriate personnel for correction, and classification of the reported conditions as a condition adverse to quality or a significant condition adverse to quality.

The Corporate Quality Assurance Department will perform an analysis of reported conditions adverse to quality to identify negative trends in quality performance and to determine if there are any broad programmatic areas where trending reveals a significant condition adverse to quality. This analysis will be performed at least annually and will be reported to appropriate levels of management. This analysis will be documented and retained as a quality assurance record.

17.2.16.3 Significant Conditions Adverse to Quality

Significant conditions adverse to quality that impede the implementation or reduce the effectiveness of the program will be controlled. These conditions will be reported to appropriate management and evaluated. The cause of a significant condition adverse to quality shall be determined, and corrective action will be taken to preclude repetition. Significant adverse conditions may include, but are not limited to, a recurring condition for which past corrective

action has been ineffective, significant trends adverse to quality, or significant Operational Quality Assurance Program deficiencies.

17.2.16.4 Reporting of 10 CFR 21 Defects and Non-compliances

A 10 CFR 21 defect and noncompliance is defined as one which could reasonably indicate a potential substantial safety hazard.

A procedure has been established, and appropriate posting provided in accordance with the provisions of 10 CFR Part 21, so that IES Utilities Inc. employees will be aware of the methods by which 10 CFR Part 21 defects and non-compliances are reported to the NRC.

The Vice President, Nuclear, is designated as the IES Utilities Inc. officer responsible for reporting defects and non-compliances, as appropriate, to the NRC.

17.2.17 **QUALITY ASSURANCE RECORDS**

17.2.17.1 Scope

Quality assurance records will be prepared, identified, collected, and protected so that adequate evidence of activities affecting quality is available.

17.2.17.2 Preparation and Identification of Quality Assurance Records

The organization responsible for the activity will also be responsible for the preparation and identification of the quality assurance records that attest to the quality of that activity.

As a general criterion, those documents that reflect the as-built condition of an item, component, system, or plant, and those documents that attest to the quality of an activity, item, structure, or system will be treated as quality assurance records. Also, the qualification records of inspection, examination and testing personnel, and quality assurance audit personnel, are classified as quality assurance records.

Quality assurance records will be legible, accurate, and complete.

17.2.17.3 Collection and Protection of Quality Assurance Records

The quality assurance records will be collected, indexed, classified, and protected.

The organization that generates the quality assurance record will be responsible for collecting the records. The collected quality assurance records will be classified as either lifetime or non-permanent quality assurance records. The lack of a classification will mean that the quality assurance record is a lifetime record.

The quality assurance records that have been identified and collected will be suitably protected against fire, theft, and damage. The manner in which the records are protected will be consistent with the retention period.

17.2.17.4 Record Storage on Optical Disks

Records may be stored on an optical disk storage system which utilizes a write once read many (WORM) system. The image of each record shall be placed onto two optical disks, with verification of the image on each record. Should any of the images be illegible, the hard copy record is maintained as the record. One optical disk shall be used for on-line access and the second optical disk shall be stored in a records storage facility meeting the requirements for single copy storage or in a separate remote location meeting the requirements of IES Utilities Inc. commitment to ANSI N45.2.9-1974.

To ensure permanent retention of records, the records stored on an optical disk are acceptably copied onto a new optical disk before the manufacturer's certified useful life of the original disk is exceeded. Records copied shall be verified.

Periodic random inspections of images stored on optical disks are performed to verify that there has been no degradation of image quality.

Should it become necessary to replace the optical imaging system with a new system which is not compatible, the records stored on the old system shall be converted onto the new system prior to the old system being taken out of service. This conversion process shall include a verification of the records converted.

17.2.17.5 Transfer or Destruction of Records

The organization responsible for the quality assurance record will be responsible for the transfer of that quality assurance record for the purposes of microfilming and/or lifetime storage.

The transfer of quality assurance records from one organization to another organization will be accomplished by a formal mechanism that provides for the acceptance of the quality assurance record.

The destruction of quality assurance records will be accomplished only with the approval of the concerned organizations.

17.2.18 **AUDITS**

17.2.18.1 Scope

A comprehensive audit program will be established and implemented.

The audit program will be sufficient to verify compliance with the Operational Quality Assurance Program and to determine the effectiveness of the Operational Quality Assurance Program.

The responsibility for the audit system will be that of the Corporate Quality Assurance Department, the Safety Committee, and the Vice President - Nuclear.

17.2.18.2 Audit System

The audit system will be applied to those organizations, both external and internal to IES Utilities Inc., that are involved in safety-related activities.

17.2.18.2.1 External Organizations

The audit program for suppliers is the responsibility of the Corporate Quality Assurance Department. Audits will be scheduled at a frequency commensurate with the status and importance of the activity.

In general, the audit schedule will be responsive to the performance of audits before the initiation of an activity to ensure that the proper controls are in place, during the early stages of the activity to determine that the proper controls are being implemented, and near the end of the activity to determine that all specified requirements have been met.

In general, the audit schedule will also include the performance of audits during the activity, assuming that the activity occurs over a sufficient length of time, to determine that the proper controls are being applied and no problems are occurring.

17.2.18.2.2 Internal Organizations

The audit program for the internal IES Utilities Inc. organizations is the responsibility of the following:

1. The Corporate Quality Assurance Department, to determine the compliance of the other organizations to the Operational Quality Assurance Program and to evaluate performance.

2. The Safety Committee, to determine the compliance of the DAEC to the Technical Specification requirements and license provisions and to evaluate performance.

3. The Vice President, Nuclear, to determine the overall effectiveness of the Operational Quality Assurance Program.

A prominent factor in developing and revising audit schedules will be performance in the subject area. The audit schedule will be revised so that weak or declining areas get increased audit coverage and strong areas receive less coverage.

An audit of safety related functions will be performed at least once per 24 months, except where a specific frequency is listed. Other audits will be performed as required by regulations. Audits of facility activities performed under the cognizance of the Safety Committee include:

- The conformance of facility operation to provisions contained within the Technical Specifications and applicable license conditions.
- The performance, training and qualifications of the facility staff.
- The results of actions taken to correct deficiencies occurring in facility equipment, structures, systems, or method of operation that affect nuclear safety.
- The performance of activities required by the Quality Assurance Program to meet the criteria of Appendix "B", 10 CFR Part 50.
- The DAEC fire protection program and implementing procedures. An independent fire protection and loss prevention inspection and audit will be performed annually utilizing either qualified offsite licensee personnel or an outside fire protection firm. An inspection and audit by an outside qualified fire consultant will be performed at intervals no greater than three years.
- Any other area of facility operation considered appropriate by the Safety Committee or the President.
- The radiological environmental monitoring program and the results thereof.
- The Offsite Dose Assessment Manual and implementing procedures.
- The Process Control Program and implementing procedures.
- The performance of activities required by the QC Program for effluent and the vendor's QA Program for radiological environmental monitoring.
- Design change package safety evaluations.

Audit reports for audits performed under the cognizance of the Safety Committee will be forwarded to the President and to the management position responsible for the areas audited within 30 days after completion of the audit.

17.2.18.3 Personnel Training and Qualification

The personnel who participate in audits will have sufficient experience and/or training to fulfill their role in the audit.

Personnel who perform as Lead Auditors will be trained, qualified, and certified.

A Lead Auditor will review the experience of each potential team member, determine their acceptability to perform the audit, determine if any additional training is required, and ensure that the additional training is performed if required.

17.2.18.4 Performance of Audit

The selected audit team shall collectively have experience or training commensurate with the total scope of the audit.

Audit checklists will be developed for the total scope of the audit.

The audit shall be initiated by a pre-audit conference to introduce the audit team and to confirm the scope and plan of the audit. A pre-audit planning meeting as defined in Appendix A may be substituted for the pre-audit conference.

Audits shall be concluded by the Audit Team with a post-audit conference at which the Audit Team will discuss the audit findings and clarify any misunderstandings.

17.2.18.5 Report and Closeout of Audit Findings

The audit will be documented by an audit report signed by a Lead Auditor.

The audit report shall be sent to the responsible management of the audited organization.

The audit findings will be tracked to ensure that corrective action has occurred.

The Corporate Quality Assurance Department will evaluate the responses to the audit findings. The evaluation will include the necessity for re-audits, submittal of documentation, or any other means of verifying the corrective action. Statements by the audited organization that define the corrective action may be accepted.

The corrective actions will be tracked to ensure that proper and timely corrective actions have occurred prior to closure of the audit findings.

Inadequate or unresponsive corrective action will be brought to the attention of appropriate levels of management.

IES Utilities Inc.
Appendix A to UFSAR/DAEC-1
Chapter 17.2
QUALITY ASSURANCE DURING THE OPERATIONS PHASE
Quality Assurance Program Description (QAPD)

INTRODUCTION

This Appendix describes the manner by which the IES Utilities Inc. Operational Quality Assurance Program for the Duane Arnold Energy Center (DAEC), as set forth in the Quality Assurance Program Description (QAPD), UFSAR Chapter 17.2, conforms to NRC Regulatory Guides listed in the June 6, 1990, letter from Region III (Miller) to Iowa Electric (Liu) and certain other commitments previously contained in Table 2-1 of the Quality Assurance Manual. Comments and clarifications to these specific commitments are identified in this Appendix.

IES Utilities Inc. position on each ANSI standard which is endorsed by a Regulatory Guide to which IES Utilities Inc. is committed is stated in either the UFSAR or the QAPD. Other ANSI standards are not requirements for IES Utilities Inc. even if they are listed as references in a standard endorsed by a Regulatory Guide to which IES Utilities Inc. is committed. (Such standards may, of course, be used as guidance.) However, a section of a standard which is specifically referred to in a standard endorsed by a Regulatory Guide to which IES Utilities Inc. is committed is a requirement for IES Utilities Inc. unless an exception is stated.

IES Utilities Inc. is not committed to ANSI N45.2 for the operational phase. Regulatory Guide 1.33, Revision 2, Section B, "Discussion" states ANSI N18.7-1972, along with ANSI N45.2-1971, "Quality Assurance Program Requirements for Nuclear Power Plants", was endorsed by Regulatory Guide 1.33. The dual endorsement was necessary in order for the guidance contained in the regulatory guide to be consistent with the requirements of Appendix B to 10 CFR Part 50; however, this dual endorsement caused some confusion among users. To clarify this situation, ANSI N18.7-1972 was revised so that a single standard would define the general quality assurance program "requirements" for the operation phase. This revised standard was approved by the American National Standards Committee N18, Nuclear Design Criteria. It was subsequently approved and designated N18.7-1976/ANS-3.2, "Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants", by the American National Standards Institute on February 19, 1976. Therefore, for the operations phase, where a standard endorsed by a Regulatory Guide refers to the use of ANSI N45.2 in conjunction with that Standard, IES Utilities Inc. inserts the ANSI Standard N18.7-1976.

1.0 REGULATORY GUIDE 1.8, "Personnel Selection and Training"

COMMENTS AND CLARIFICATIONS:

IES Utilities Inc. complies with the Regulatory Position of this Regulatory Guide with the following clarifications:

1.1 IES Utilities Inc's. commitment is to Regulatory Guide 1.8, Revision 1-R, September 1975 (reissued May 1977), which endorses ANSI N18.1-1971. However, the IES Utilities Inc. commitment is to ANSI/ANS 3.1-1978, which is a revision of N18.1-1971.

1.2 With respect to selection and training of security personnel, IES Utilities Inc. does not commit to the standard [ANSI N18.17-1973 (ANS 3.3)] referred to in ANSI/ANS 3.1-1978, Sections 1 (Scope) and 6 (References). The IES Utilities Inc. training and qualification plan for security personnel complies with 10 CFR Part 73, Appendix B.

2.0 REGULATORY GUIDE 1.26, "Quality Group Classifications and Standards for Water-, Steam-, and Radioactive-Waste- Containing Components of Nuclear Power Plants"

COMMENTS AND CLARIFICATIONS:

The IES Utilities Inc. commitment to Safety Guide 26 (3/23/72), Quality Group Classifications and Standards, is stated in UFSAR Chapter 1.8, Conformance to NRC Regulatory Guides.

3.0 REGULATORY GUIDE 1.28, "Quality Assurance Program Requirements (Design and Construction)"

COMMENTS AND CLARIFICATIONS:

This Regulatory Guide (Safety Guide 28, dated June 7, 1972) endorses ANSI N45.2 and is not applicable to the operating phase. DAEC's operational QA program is based on Regulatory Guide 1.33, Rev. 2, as stated in UFSAR Section 1.8.

4.0 REGULATORY GUIDE 1.29, "Seismic Design Classification"

COMMENTS AND CLARIFICATIONS:

The IES Utilities Inc. commitment to Safety Guide 29 (6/7/72), Seismic Design Classification, is stated in UFSAR Section 1.8, Conformance to NRC Regulatory Guides.

5.0 REGULATORY GUIDE 1.30, "Quality Assurance Requirements for the Installation, Inspection, and Testing of Instrumentation and Electric Equipment"

COMMENTS AND CLARIFICATIONS:

IES Utilities Inc. complies with the Regulatory Position of this Regulatory Guide with the following clarifications:

5.1 The IES Utilities Inc. commitment is to Safety Guide 30, dated August 11, 1972 and therefore by reference to ANSI N45.2.4-1972 which it endorses.

5.2 For maintenance and modification activities, IES Utilities Inc. shall comply with the Regulatory Position established by this Regulatory Guide in that the quality assurance program requirements included therein (subject to the clarifications below) shall apply. Technical requirements associated with maintenance and modification activities shall be equal to or better than the original requirements (e.g., Code requirements, design and construction specification requirements, and inspection requirements).

5.3 Regulatory Position C.1 states that ANSI N45.2.4-1972 should be used in conjunction with ANSI N45.2-1971. In lieu of this, IES Utilities Inc. uses ANSI N45.2.4-1972 in conjunction with ANSI N18.7-1976.

5.4 Section 2.2(5)(d) of ANSI N45.2.4-1972 requires evidence of compliance by manufacturer with purchase requirements, including quality assurance requirements, before the requirements of ANSI N45.2.4-1972 are implemented. In lieu of this, IES Utilities Inc. may proceed with installation, inspection, and testing activities for equipment lacking its quality documentation provided that this equipment has been identified and controlled in accordance with IES Utilities Inc.'s nonconformance reporting system.

5.5 With respect to Section 2.5.2 of ANSI N45.2.4-1972, calibration and control covers two classes of instrumentation used by IES Utilities Inc.: (1) portable equipment and (2) permanently-installed equipment. With respect to permanently-installed instrumentation, in lieu of marking the equipment to indicate the date of the next required calibration, a computer-based preventative maintenance program is used. Once a permanently-installed instrument is identified as needing control, a calibration frequency is assigned, and the information is entered into the data base. The calibration task is then automatically tracked and tasked by the data base. A "DO NOT USE Until Tested and Calibrated" or equivalent sticker is applied to instruments not calibrated before their due date and to instruments unacceptable for use. The provisions of ANSI N45.2.4-1972, Section 2.5.2, are applied to portable equipment.

5.6 Section 3 of ANSI N45.2.4-1972 regarding "Preconstruction Verification" states it is necessary to verify that the quality of an item has not suffered during the interim period and it is not intended to duplicate inspections but rather verify that items are in a satisfactory condition for installation. Verifications and checks are then required. In lieu of these verifications and checks, IES Utilities Inc. considers the provisions of QAPD Sections 17.2.8 (Identification and Control of Materials, Parts, and Components) and 17.2.13 (Handling, Storage and Shipping) to be equivalent.

5.7 The last paragraph of Section 6.2.1 of ANSI N45.2.4-1972 requires that items requiring calibration be tagged or labeled on completion, indicating date of calibration and identity of person who performed the calibration. In lieu of this, for permanently-installed instrumentation, the calibration status is reflected in a computerized preventive maintenance program as described in Section 5.5 above.

6.0 REGULATORY GUIDE 1.33, "Quality Assurance Program Requirements (Operation)"

COMMENTS AND CLARIFICATIONS:

IES Utilities Inc. complies with the Regulatory Position of this Regulatory Guide with the following clarifications:

6.1 The commitment is to Regulatory Guide 1.33, Rev. 2, February 1978, and to ANSI N18.7-1976/ANS-3.2 which it endorses.

6.2 Regulatory Guide 1.33 Regulatory Position, Section C.2, also lists fifteen Regulatory Guides and ANSI standards that are referenced in ANSI N18.7-1976/ANS-3.2. The IES Utilities Inc. position with respect to each of these standards is stated elsewhere in this Appendix A.

6.3 Regulatory Guide 1.33 Regulatory Position, Section C.4, refers to Section 4.5, "Audit Program", of ANSI N18.7-1976/ANS-3.2 and lists specified audit frequencies for three (3) audits. The frequencies for audits are now specified in UFSAR Section 17.2.18.2.2.

6.4 Section 4.3.2.3 (Quorum for Independent Review Program) of ANSI N18.7-1976/ANS-3.2 indicates a Quorum for formal meetings "... shall consist of not less than a majority of the principals, or duly appointed alternatives..." Additionally, "the chairman (or his duly appointed alternate) shall be present for all formal meetings". Section 6.5.2.6 of Appendix A (Technical Specifications) to the Facility Operating License indicates "A Quorum of the Safety Committee shall consist of the Chairman or Vice Chairman and at least four members with a maximum of two alternates as voting members". The requirements of the Technical Specifications as stated above shall govern.

6.5 With respect to Section 4.3.4 (1), Subjects Requiring Independent Review, of ANSI N18.7-1976/ANS-3.2, the DAEC Safety Committee is not required to review safety evaluations of changes in the facility which are completed under 10 CFR Part 50.59.

6.6 Section 5.1 (Program Description) of ANSI N18.7-1976/ANS-3.2 requires a "summary document" for the Quality Assurance Program. The QAPD and Appendix A thereto fulfill this requirement for IES Utilities Inc.

6.7 Section 5.2.2 (Procedure Adherence) of ANSI N18.7-1976/ANS-3.2 states that temporary procedure changes which do not change the intent of the procedure are required to be approved by two members of the plant staff, of which one shall hold a senior operators license. In lieu of one of these members being the on-shift senior operator, a non-shift senior licensed operator may approve of these temporary changes.

6.8 Not Used

6.9 Section 5.2.7 (Maintenance and Modifications) of ANSI N18.7-1976/ANS-3.2 lists six standards that are to be applied to activities occurring during the operational phase that are comparable to related activities during design and construction. Five of these standards are addressed elsewhere in this Appendix A.

IES Utilities Inc. does not follow one of those listed, ANSI N101.4-1972, Quality Assurance for Protective Coatings Applied to Nuclear Facilities. See UFSAR Section 17.2.9.5 for IES Utilities Inc.'s controls relative to "Special Protective Coatings".

6.10 With respect to Section 5.2.9 (Plant Security and Visitor Control) of ANSI N18.7-1976/ANS-3.2, the DAEC Security Plan meets the stated requirements.

However, the Standard references ANSI N18.17 for guidance. IES Utilities Inc. is not committed to ANSI N18.17. The DAEC Security Plan complies with 10 CFR Part 73.

6.11 Section 5.2.15 (Review, Approval and Control of Procedures) of ANSI N18.7-1976/ANS-3.2, fourth paragraph requires:

"Plant procedures shall be reviewed by an individual knowledgeable in the area affected by the procedure no less frequently than every two years to determine if changes are necessary or desirable."

This requirement is replaced by the following:

"Plant procedures shall be reviewed, in accordance with the following, to determine if changes are necessary or desirable:

1) Non-routine procedures, such as emergency operating procedures, off-normal procedures, those that implement the emergency plan, and others where usage may be dictated by an event, shall be reviewed at least every two years by an individual knowledgeable in the area affected by the procedure.

2) The procedures which have a frequency of use which exceeds two years, shall be reviewed prior to use, or every two years by an individual knowledgeable in the area affected by the procedure.

3) Routine plant procedures which are not addressed by (1) and (2) above shall be maintained through use of the procedure revision process. The need for changes to these procedures are identified through other processes, such as: plant modifications; nonconformance reporting system; test control; performance of operations and maintenance activities; updates to the Updated Final Safety Analysis Report (UFSAR); vendor manual control; reviews of industry operating experience; Operating/License Amendments; design specification changes; control of procedure changes; Quality Assurance audits; training; and other routine activities under the Quality Assurance Program. In addition, on a frequency not to exceed 2 years, an independent audit or assessment of a representative sample of routine plant procedures shall be performed to evaluate the effectiveness of the procedure review and revision program.

6.12 Section 5.2.16 (Measuring and Test Equipment) of ANSI N18.7-1976/ANS-3.2 requires that equipment be suitably marked to indicate calibration status. Section 5.2.16 refers to ANSI N45.2.4-1972, which requires (Section 2.5.2, Calibration and Control) that equipment be suitably marked to indicate date of next required calibration and (Section 6.2.1, Equipment Tests) that items requiring calibration be tagged or labeled on completion, indicating date of calibration and identity of the person who performed the calibration. See the discussion provided in Section 5.5 of this document for IES Utilities Inc.'s commitment.

6.13 Instead of the format specified in Section 5.3.9.1, (Emergency Procedure Format and Content) of ANSI N18.7-1976/ANS- 3.2, of IES Utilities Inc.'s DAEC Emergency Operating Procedures (EOPs) are in a flowchart format. The contents of the DAEC Engineering Operating Procedures are in accordance with the guidelines of the BWR Owner's Group (BWROG) Emergency Procedure Guidelines, as reviewed and approved in the NRC Safety Evaluation Report, BWROG EPG, Revision 4, September 1988.

7.0 REGULATORY GUIDE 1.37, "Quality Assurance Requirements for Cleaning of Fluid Systems and Associated Components of Water-Cooled Nuclear Power Plants"

COMMENTS AND CLARIFICATIONS:

IES Utilities Inc. complies with the Regulatory Position of this Regulatory Guide with the following clarifications:

7.1 The commitment is to Regulatory Guide 1.37, Revision 0, 3/16/73, and to ANSI N45.2.1-1973 which it endorses.

7.2 IES Utilities Inc. shall comply with the Regulatory Position established in this Regulatory Guide for maintenance and modification activities in that the quality assurance program requirements included therein shall apply. Technical requirements associated with maintenance and modification activities shall be equal to or better than the original requirements (e.g., Code requirements, design and construction specification requirements, and inspection requirements).

8.0 REGULATORY GUIDE 1.38, "Quality Assurance Requirements for packaging, Shipping, Receiving, Storage, and Handling of Items for Water-Cooled Nuclear Power Plants"

COMMENTS AND CLARIFICATIONS:

IES Utilities Inc. complies with the Regulatory Position of this Regulatory Guide with the following clarifications:

8.1 The IES Utilities Inc. commitment is to Regulatory Guide 1.38, Revision 2, May 1977, which endorses ANSI N45.2.2-1972. However, the IES Utilities Inc. commitment is to the later version of this Standard, ANSI/ASME N45.2.2-1978.

8.2 The applicability of the requirements of Section 3 and 4 and the Appendix of ANSI N45.2.2, and the paragraphs of the Regulatory Guide relating to these Sections (C.1.c, C.1.e, and C.2), is limited to the procurement of major plant equipment replacements; they are not applied to procurement of operating plant spares and modifications.

8.3 The shipping damage inspections required by Section 5.2.1 of ANSI N45.2.2 will be performed by Storekeepers prior to unloading in lieu of ANSI N45.2.6 certified inspectors. A shipping damage inspection is performed by ANSI N45.2.6 certified inspectors at a later point in the receiving process for applicable items.

9.0 REGULATORY GUIDE 1.39, "Housekeeping Requirements for Water-Cooled Nuclear Power Plants"

COMMENTS AND CLARIFICATIONS:

IES Utilities Inc. complies with the Regulatory Position of this Regulatory Guide with the following clarification:

9.1 The IES Utilities Inc. commitment is to Regulatory Guide 1.39, Revision 2, September 1977, and to ANSI N45.2.3-1973 which it endorses.

10.0 REGULATORY GUIDE 1.54, "Quality Assurance Requirements for Protective Coatings Applied to Water-Cooled Nuclear Power Plants"

COMMENTS AND CLARIFICATIONS:

IES Utilities Inc. is not committed to Regulatory Guide 1.54, June 1973. IES Utilities Inc.'s controls relative to protective coatings are contained in UFSAR Section 17.2.9.5.

11.0 REGULATORY GUIDE 1.58, "Qualification of Nuclear Power Plant Inspection, Examination, and Testing Personnel"

COMMENTS AND CLARIFICATIONS:

IES Utilities Inc. complies with the Regulatory Position of this Regulatory Guide with the following clarifications:

11.1 The IES Utilities Inc. commitment is to Regulatory Guide 1.58, Revision 1, September 1980, and to ANSI N45.2.6-1978 which it endorses.

11.2 ANSI N45.2.6-1978 Section 1.2, "Applicability", first paragraph, states that this standard applies to personnel who perform inspections, examinations, and tests during fabrication prior to and during receipt of items at the construction site, during construction, during preoperational and startup testing, and during operational phases of nuclear power plants.

The qualification of inspection personnel shall be documented on the basis of either this standard (i.e., ANSI N45.2.6-1978) or on the basis of task qualification in accordance with Regulatory Guide 1.8, Revision 1-R, May 1977 and ANSI/ANS 3.1 - 1978. The basis for deciding which method is used for qualification is described below:

- Personnel performing inspections as of October 1, 1995, are certified to this standard (ANSI N45.2.6-1978) for the performance of inspections.

- Personnel contracted to perform inspections at the DAEC will continue to be qualified for the performance of inspections in accordance with this standard (ANSI N45.2.6-1978).

- Effective with the approval of Revision 16 to the DAEC Quality Assurance Program Description, craft personnel may become qualified to perform inspection by the successful completion of the training for that task. For example, the performance of dimensional measurements by a craftsperson in the performance of a repair activity is an equivalent task performed by an inspector qualified per ANSI N45.2.6 - 1978 for performing dimensional measurements. In addition to this task qualification, craft personnel qualified in accordance with this method shall also receive an annual eye examination for vision and color acuity.

- Personnel performing testing activities shall have appropriate experience and training to assure competence in accordance with Regulatory Guide 1.8 (ANSI/ANS 3.1-1978).

11.3 ANSI N45.2.6 Section 1.2, "Applicability", third paragraph, requires that this standard be used in conjunction with ANSI N45.2. IES Utilities Inc. is not committed to ANSI N45.2.

11.4 ANSI N45.2.6 Section 1.2, "Applicability", fourth paragraph, requires that this standard be applied to organizations other than IES Utilities Inc. The specific applicability of this standard to other organizations is specified on a case-by-case basis in the procurement documents issued to those suppliers of materials and services.

11.5 Regulatory Guide 1.58 Revision 1, in Section B, "Discussion", endorses ASNT Recommended Practice No. SNT-TC-1A-1975 for the qualification of nondestructive testing personnel. In accordance with the IES Utilities Inc. ASME Section XI program the 1980 Edition with addenda through Winter 1981 govern. Section IWA-2300 of this Code requires nondestructive personnel to be qualified to SNT-TC-1A-1980.

In accordance with Regulatory Guide 1.147, ASME Code Case N-356, and IES Utilities Inc. ASME Section XI Relief Request NDE-006, the recertification period for NDE Level III personnel shall be every five years as opposed to the three years as stated in SNT-TC-1A-1980, paragraph 9.7.1.

12.0 REGULATORY GUIDE 1.64, "Quality Assurance Requirements for the Design of Nuclear Power Plants"

COMMENTS AND CLARIFICATIONS:

IES Utilities Inc. complies with the Regulatory Position of this Regulatory Guide. The IES Utilities Inc. commitment is to Regulatory Guide 1.64, Revision 2, June 1976, and to ANSI N45.2-11-1974 which it endorses.

13.0 REGULATORY GUIDE 1.74, "Quality Assurance Terms and Definitions"

COMMENTS AND CLARIFICATIONS:

IES Utilities Inc. complies with the Regulatory Position of this Regulatory Guide with the following clarifications:

13.1 The IES Utilities Inc. commitment is to Regulatory Guide 1.74, February 1974, and to ANSI N45.2.10-1973, which it endorses.

13.2 IES Utilities Inc. has adopted the definition of "Audit" which appears in ANSI/ASME N45.2.12-1977, Requirements for Auditing of Quality Assurance Programs for Nuclear Power Plants, in lieu of the definition in ANSI N45.2.10-1973.

14.0 REGULATORY GUIDE 1.88, "Collection, Storage, and Maintenance of Nuclear Power Plant Quality Assurance Records"

COMMENTS AND CLARIFICATIONS:

IES Utilities Inc. complies with the Regulatory Position of this Regulatory Guide with the following clarifications:

14.1 The IES Utilities Inc. commitment is to Regulatory Guide 1.88, Revision 2, October 1976, and to ANSI N45.2.9-1974 which it endorses.

14.2 Section 3.2.2 of ANSI N45.2.9-1974 specifies establishment of an "index". As we understand this term, it can include a collection of documents or indices (some of which may be computer-based) which, when taken together, supply the information attributed to an "index" in the Standard. Record retention requirements for records are specified. The specific retention times for records are indicated when the records are transmitted for permanent storage. IES Utilities Inc. utilizes computer-aided retrieval systems to index and locate records.

14.3 Section 5 of ANSI N45.2.9-1974, "Storage, Preservation and Safekeeping", provides no distinction between temporary and permanent facilities. To address temporary storage, the following position is established: Active records (those completed but not yet duplicated or placed on microfilm) may be temporarily stored in one-hour fire rated file cabinets until such time as they are duplicated or microfilmed. Open-ended documents--those revised or updated on a more-or-less continuing basis over an extended period of time (e.g. personnel qualification and training documents) and those which are cumulative in nature (e.g. nonconforming item logs and control room log books)--are not considered as QA records since they are not "complete". These types of documents shall become QA records when they are issued as a specific revision, when they are filled-up or discontinued, or on a periodic basis when the completed portion of the on-going document shall be transferred to permanent storage as a "record".

14.4 The requirements of Section 4.3 (Receipt Control) of ANSI N45.2.9-1974 are implemented only for the permanent record files and not for temporary record files.

14.5 The requirements of Section 5.3 (Storage) of ANSI N45.2.9-1974 are implemented only for the permanent record files and not for temporary record files.

15.0 REGULATORY GUIDE 1.94, "Quality Assurance Requirements for Installation, Inspection, and Testing of Structural Concrete and Structural Steel During the Construction Phase of Nuclear Power Plants"

COMMENTS AND CLARIFICATIONS:

IES Utilities Inc. complies with the Regulatory Position of this Regulatory Guide with the following clarifications:

15.1 The IES Utilities Inc. commitment is to Regulatory Guide 1.94, Revision 1, April 1976, and to ANSI N45.2.5-1974 which it endorses.

15.2 For modification activities IES Utilities Inc. shall comply with the Regulatory Position established by this Regulatory Guide in that the quality assurance program requirements included therein shall apply. Technical requirements associated with modification activities shall be equal to or better than the original requirements (e.g., Code requirements, design and construction specification requirements, and inspection requirements).

16.0 REGULATORY GUIDE 1.116, "Quality Assurance Requirements for Installation, Inspection, and Testing of Mechanical Equipment and Systems"

COMMENTS AND CLARIFICATIONS:

IES Utilities Inc. complies with the Regulatory Position of this Regulatory Guide with the following clarifications:

16.1 The IES Utilities Inc. commitment is to Regulatory Guide 1.116, Revision O-R, June 1976, with first page revision May 1977, and to ANSI N45.2.8-1975 which it endorses.

16.2 IES Utilities Inc.'s commitment to this Regulatory Guide is applicable to maintenance and modification activities in that the quality assurance program requirements included therein shall apply. Technical requirements associated with maintenance and modification activities shall be equal to or better than the original requirements (e.g., Code requirements, design and construction specification requirements, and inspection requirements).

17.0 REGULATORY GUIDE 1.123, "Quality Assurance Requirements for Control of Procurement of Items and Services for Nuclear Power Plants"

COMMENTS AND CLARIFICATIONS:

IES Utilities Inc. complies with the Regulatory Position of this Regulatory Guide with the following clarifications:

17.1 The IES Utilities Inc. commitment is to Regulatory Guide 1.123, Revision 1, July 1977, and to ANSI N45.2.13-1976 which it endorses.

18.0 REGULATORY GUIDE 1.144, "Auditing of Quality Assurance Programs for Nuclear Power Plants"

COMMENTS AND CLARIFICATIONS:

IES Utilities Inc. complies with the Regulatory Position of this Regulatory Guide with the following clarifications:

18.1 The IES Utilities Inc. commitment is to Regulatory Guide 1.144, Revision 1, September 1980, and to ANSI N45.2.12-1977 which it endorses.

18.2 Section 1.1, "Scope", and Section 1.2, "Applicability", of ANSI N45.2.12-1977 reference ANSI N45.2. IES Utilities Inc. is committed to ANSI N18.7-1976 for the operational phase, consistent with its commitment to Regulatory Guide 1.33.

18.3 Regulatory Position C.3.b(1) states that external audits, after the award of a contract, are not necessary for procurement actions where acceptance of the product is in accordance with Section 10.3.2, "Acceptance by Reviewing Inspection", of ANSI N45.2.13-1976. The suppliers of products that meet this requirement are included on the IES Utilities Inc. external audit schedule and are audited on a triennial basis.

18.4 ANSI N45.2.12, Section 4.3.1 "Pre-Audit Conference"

For internal audits, a "pre-audit planning meeting" may be substituted for the "pre-audit conference." The pre-audit planning meeting should accomplish the following:

1) The Lead Auditor to present the proposed audit plan and an opportunity for the audited organizations to provide input to the proposed audit plan.
2) Introduce the Lead Auditor and identify proposed audit team members. Those audit team members available will be introduced. Note: Non-utility team members are usually not available at these meetings.
3) Counterparts are invited to these audit planning meetings as part of the planning process.
4) The audit schedule is presented, including a tentative exit date. The final exit date is announced separately during the audit period.
5) The channels of communication are opened at the audit planning meeting through participation in the audit planning process.
6) Following the audit planning meeting, the Lead Auditor will finalize the audit plan.

19.0 <u>REGULATORY GUIDE 1.146, "Qualification of Quality Assurance Program Audit Personnel for Nuclear Power Plants"</u>

COMMENTS AND CLARIFICATIONS:

IES Utilities Inc. complies with the Regulatory Position of this Regulatory Guide with the following clarifications:

19.1 The IES Utilities Inc. commitment is to Regulatory Guide 1.146, August 1980, and to ANSI N45.2.23-1978 which it endorses.

19.2 ANSI N45.2.23 Section 1.2 references ANSI N45.2. For IES Utilities Inc., the entities subject to audit are defined in 10 CFR 50 Appendix B and ANSI N18.7-1976. This is consistent with IES Utilities Inc.'s commitment to Regulatory Guide 1.33 which endorses ANSI N18.7-1976, in lieu of ANSI N45.2.

20.0 REGULATORY GUIDE 1.155, "Station Blackout"

COMMENTS AND CLARIFICATIONS:

IES Utilities Inc. complies with Appendix A, "Quality Assurance Guideline for Non-Safety Systems and Equipment," to Regulatory Guide 1.155, Revision 1, August 1988.

21.0 REGULATORY GUIDE 4.15, "Quality Assurance for Radiological Monitoring Programs (Normal Operations) - Effluent Streams and the Environment"

COMMENTS AND CLARIFICATIONS

IES Utilities Inc. complies with the Regulatory Position in Regulatory Guide 4.15, Revision 1, February 1979.

22.0 ASME B&PV Code, Section XI, 1980 Edition with Addenda through Winter 1981

COMMENTS AND CLARIFICATIONS:

The IES Utilities Inc. commitments relative to the Ten-Year Inspection Program and the Pump and Valve Test Program are established separately in formal correspondence with the Nuclear Regulatory Commission and incorporated into appropriate IES Utilities Inc. documents.

Discussion of Changes in the Quality Assurance Program Description

Attachment 2

Background for Change to Inspection Program:

The Quality Assurance organization has had responsibility for the inspection program (i.e. identification of points requiring inspection and performance of the inspections) at the DAEC since the late 1970s. The inspection program was implemented by an independent Quality Assurance organization as at other commercial nuclear power plants. In order to optimize staff utilization, increase plant staffing efficiencies and enhance the implementation of the inspection program, the "ownership" of the inspection program will be transferred from the Quality Assurance organization to the Maintenance organization (i.e. those responsible for achieving quality).

The shift of the inspection responsibilities from the Quality Assurance organization to those responsible for performance of the work will be implemented gradually. Initial steps include the transfer of inspection planning from the Quality Assurance organization to the work order planners. The work order planners will be fully trained in the Quality Assurance requirements for inspection planning. Additionally, during the transition period, inspection planning documents will be reviewed by both the current Quality Control Engineering staff and the work order planners to ensure full compliance with established inspection planning requirements. In addition to the change in responsibility for inspection planning, the current Quality Control Inspectors, who are qualified to ANSI N45.2.6 - 1978, will be assigned to the maintenance organization from which they will continue to perform inspections. Other plant inspections (e.g. radwaste, refueling and receiving inspection) will be coordinated with the maintenance organization. The selection of personnel assigned to perform inspections will be the responsibility of a maintenance supervisor who will be tasked with ensuring that inspections are performed by qualified individuals who are independent of the work.

Other changes in the inspection program include the performance of inspections by peers. These peer inspections will continue to be independent inspections. The basis for qualification of peer inspectors will be demonstrated knowledge and performance in accordance with the provisions of ANSI/ANS 3.1-1978. In addition, these peer inspectors will receive an eye examination for acuity and color blindness. The Quality Control Inspectors will continue to be qualified in accordance with the DAEC commitment to Regulatory Guide 1.58 and ANSI N45.2.6 - 1978. Over time, the inspectors will gain qualifications to perform craft tasks. In addition, the task qualified personnel may also gain task qualifications to perform inspections. It is anticipated DAEC will gradually approach a peer inspection program. Inspectors necessary to support outages (e.g. augmented staff) will continue to be evaluated consistent with the commitment to Regulatory Guide 1.58 and ANSI N45.2.6 - 1978.

The Quality Assurance organization will assign additional resources to the ongoing assessment of inspection and maintenance activities. Assigned personnel will focus on the quality of the maintenance function, including the selection of inspection points, development of acceptance criteria, and performance of those inspections by personnel who are both independent of the work and qualified to perform those inspections.

The long-term goal for transferring the inspection program from the Quality Assurance organization is to place the "ownership" for accurate, precise, and complete performance of the work in the organization responsible for the work. This goal is to be achieved while meeting the requirements of 10 CFR Part 50, Appendix B, Criterion II and X regarding the training of inspectors and the performance of inspections by persons sufficiently independent of the work.

Discussion of Changes in the Quality Assurance Program Description

1. 17.2.1.2, Manager, Corporate Quality Assurance

Identification of the Change:

Removed the last paragraph of section 17.2.1.2 (p. 17.2-2) which stated that: "The Manager, Corporate Quality Assurance also evaluates the effectiveness of the Operational Quality Assurance Program through reviews of plant operation, maintenance, modification, and testing documents for inclusion of adequate quality requirements and for inclusion of inspection, witness and hold points; and provides the necessary support to perform these inspections and tests. Other responsibilities include performing receiving, in-process, and final inspections."

Removed the first two sentences of the first paragraph on page 17.2-3: "Training responsibilities include assuring that Quality Control personnel maintain proficiency and certification in nondestructive examination (NDE) techniques and other inspection activities. Certification in NDE requires coordination with the Corporate Level III NDE."

Reason for the Change:

The previous description assigned responsibility for planning and performing inspections to the Manager, Corporate Quality Assurance. The identification of points requiring inspection is transferred from the Quality Assurance organization to the organizations responsible for the function. The organization responsible for planning the work is cognizant of the critical attributes to be provided or culled from approved instructions, procedures, and drawings for inclusion in an inspection plan.

The majority of the inspections performed at the DAEC are related to plant maintenance. Therefore, the responsibility for performance of inspections has been transferred to the Maintenance Department. This reassignment will foster close communication between the inspector and the craftsperson, enhance the understanding among craftspeople that an inspection is a positive step contributing to the completion of work, minimize time spent waiting for an inspector, optimize resources and provide an opportunity for an inspector to maintain and enhance craft skills in the future as the DAEC moves to a peer inspection program. Support for receiving inspections, in-process, and final inspections for other departments will be coordinated by the maintenance organization in the same way as the Quality Assurance organization did previously.

The responsibility for training the inspection staff resides within the Maintenance Department in coordination with the Manager, Nuclear Training and the DAEC Corporate Level III NDE (resides in Engineering). The Quality Assurance organization will continue to assure the implementation of the inspector training program and the overall inspection program by performing surveillances and audits.

Discussion of Changes in the Quality Assurance Program Description

Basis for Concluding that the Changed Quality Assurance Program Continues to Satisfy 10 CFR Part 50, Appendix B and Previous Quality Assurance Program Commitments

This change is consistent with Criterion X of 10 CFR Part 50, Appendix B which stipulates that the inspection program is to verify that completed work conforms with documented instructions, procedures and drawings.

After this change is adopted, there is a continued commitment to comply with the provisions of 10 CFR Part 50, Appendix B, Criterion X regarding the performance of inspections, and the inspection program defined in the Quality Assurance Program Description. This change eliminates the commitment to maintain the inspection function within an organization fully independent from the organization which performs the work. In the past inspections were performed by a Quality Control staff organizationally and functionally independent from the work submitted for inspection. In the future the Maintenance Department will be tasked with assuring that personnel performing inspections remain sufficiently independent of the work activities to provide effective inspections. The functional independence of the inspectors from the completed work will continue to be consistent with the provisions of 10 CFR Part 50, Appendix B, Criterion X (Inspection) which states that "inspections shall be performed by individuals other than those who performed the activity being inspected". This change is not a reduction in commitment.

The responsibility and authority for the establishment and execution of the Operational Quality Assurance Program for the operation of the DAEC will be retained by IES Utilities Inc.

17.2.1.2 Manager, Corporate Quality Assurance

The Manager, Corporate Quality Assurance reports to the Vice President - Nuclear and is assigned the primary responsibility for ensuring that quality requirements relative to the safe operation of the DAEC are identified and met.

Fulfilling the responsibilities of the Corporate Quality Assurance Department requires significant communication with the DAEC, the Nuclear Licensing Department, the Emergency Planning Department, the Nuclear Business Unit, the Engineering Department, the Training Department, and the Purchasing Department.

The Manager, Corporate Quality Assurance is responsible for preparing and maintaining the Operational Quality Assurance Program and the Quality Assurance Department implementing procedures.

The Manager, Corporate Quality Assurance is also responsible for evaluating the effectiveness of the Operational Quality Assurance Program and issuing periodic reports to the appropriate levels of management. Effectiveness of the Operational Quality Assurance Program at the DAEC is determined through internal audits and surveillances and through analysis and trending of reported conditions adverse to quality. The Manager, Corporate Quality Assurance also provides support for the procurement of materials and equipment through audits, surveillances, and evaluations of suppliers and contractors for quality capabilities and performance and maintains the list of approved suppliers for nuclear procurements.

Training responsibilities include the training of Quality Assurance Department personnel and Nuclear Generation Division personnel relative to the Operational Quality Assurance Program.

The Manager, Corporate Quality Assurance provides direct support to the nuclear Safety Committee and assures that Quality Assurance Department personnel are designated to support the Operations Committee.

17.2.1.2.1 Stop Work Authority

The Manager, Corporate Quality Assurance has the authority to issue a stop work instruction to the organization that has direct responsibility for the work. Only the Vice President - Nuclear has the authority to override the stop-work instruction.

Discussion of Changes in the Quality Assurance Program Description

2. 17.2.2.6, Indoctrination and Training

Identification of the Change:

In the second paragraph revised the title of the responsible manager from the Plant Superintendent - Nuclear to Plant Manager, Nuclear.

In the fourth paragraph removed "engineering" before "...personnel..." and inserted "the Plant Manager, Nuclear" between "...the Manager of Engineering..." and "...and the Manager, Nuclear Training..." in the first sentence. Removed from the last sentence "Training Department" after "...at the DAEC...".

In the sixth paragraph removed "and the Manager, Nuclear Training" at the end of the paragraph.

Reason for the Change:

The title Plant Superintendent - Nuclear has been changed to Plant Manager, Nuclear. This is a title change. The responsibilities of the position are unchanged.

In the fourth paragraph, the term "engineering" was removed because the technical training program extends beyond the engineering staff. The Plant Manager, Nuclear was added because technical training is provided to personnel under his cognizance. The term "Training Department" was removed because technical training may be provided at the other DAEC locations.

Removed the Manager, Nuclear Training as a manager under whom the training for emergency preparedness is performed in order to recognize the Manager, Emergency Planning as the manager responsible for the training.

Basis for Concluding that the Changed Quality Assurance Program Continues to Satisfy 10 CFR Part 50, Appendix B and Previous Quality Assurance Program Commitments

The role, responsibilities and authority of the Plant Manager, Nuclear are the same with respect to operations training as those previously held by the Plant Superintendent - Nuclear. This is a title change only. Clarified which managers are responsible for the training of personnel performing technical and emergency planning activities. The responsibilities of the respective managers have not changed.

These changes are not a reduction in commitment.

Utilities Inc. Corporate Quality Assurance Department before the initiation of activities affected by the program.

17.2.2.6 Indoctrination and Training

The indoctrination, training, and retraining of personnel who participate in safety-related activities are provided in five broad areas: operator training, quality assurance indoctrination, technical training, radiation safety indoctrination and training, and emergency preparedness training.

The Operator training provided to senior reactor operators and reactor operators is under the cognizance of the Plant Manager, Nuclear, and the Manager, Nuclear Training.

The quality assurance indoctrination provided to IES Utilities Inc. personnel is under the cognizance of the Manager, Corporate Quality Assurance and the Manager, Nuclear Training.

The technical training provided to IES Utilities Inc. personnel is under the cognizance of the Manager of Engineering, the Plant Manager, Nuclear, and the Manager, Nuclear Training. The training may be provided in a number of ways, from self-study courses to formalized courses at the DAEC and educational institutions.

Indoctrination and training provided to IES Utilities Inc. personnel and contract personnel relative to performing work in areas that are potentially hazardous because of radioactivity are under the cognizance of the Radiation Protection Manager and the Manager, Nuclear Training.

The indoctrination and training provided to IES Utilities Inc. personnel and contract personnel relative to emergency preparedness is under the cognizance of the Manager, Emergency Planning.

17.2.2.7 Management Review and Audit

The status of the IES Utilities Inc. Operational Quality Assurance Program is periodically made known to management. A periodic report is prepared by the Manager, Corporate Quality Assurance and submitted to the Vice President - Nuclear.

An annual audit of the Operational Quality Assurance Program is conducted to evaluate the effectiveness of the overall program. Direction for these audits alternates between the Vice President - Nuclear and the Safety Committee. The Safety Committee audit is in accordance with the Technical Specifications requirement for a biennial audit of the quality assurance program. These alternating audits complement each other and provide an annual evaluation.

Discussion of Changes in the Quality Assurance Program Description

3. 17. 2.6.2, Preparation

Identification of the Change:

Remove the list of the types of documents which are subject to the IES Utilities Inc. established document control program.

Reason for the Change:

The deleted listing identified specifications, drawings, procurement documents, Quality Assurance Manual, Nuclear Generation Division Manual, Departmental Procedures, safety analysis reports and related design criteria documents, welding manual and computer codes as the types of documents which are controlled. These are examples of the types of documents which are controlled; it is an inappropriate level of detail for the Quality Assurance Program Description.

Basis for Concluding that the Changed Quality Assurance Program Continues to Satisfy 10 CFR Part 50, Appendix B and Previous Quality Assurance Program Commitments

The commitment to implement a document control program is stated in the first paragraph of section 17.2.6.2 and remains unchanged. The list is unnecessary because such documents are identified in the implementing procedures. This change results in continued compliance with the provisions of 10 CFR Part 50, Appendix B, Criterion VI regarding the control of changes to controlled documents. The policy for making changes to controlled documents continues to be defined in the Quality Assurance Program Description. This change is not a reduction in commitment

Drawings will be prepared using industrially accepted standards.

17.2.5.3 Compliance

Following approval and issuance of instructions, procedures and drawings, respective activities will be performed in accordance with the documents. If an activity cannot be accomplished due to an inadequacy of the document, the document will be formally revised to reflect the manner in which the activity is to be performed.

17.2.6 **DOCUMENT CONTROL**

17.2.6.1 Scope

The organization responsible for the documents will establish measures to ensure that the documents, including changes, are reviewed for adequacy and are approved for release by authorized personnel. The responsible organization also establishes measures to ensure the documents are distributed to and used at the location where the prescribed activity is performed and are controlled.

17.2.6.2 Preparation

Administrative techniques will be established that define the documents to be issued and controlled, identify the current revision or issue of the document, and identify the individuals who are to receive the document.

17.6.2.3 Review and Approval

Documents that are specified as being controlled documents are reviewed to ensure that regulatory, technical, and quality assurance requirements have been appropriately addressed; that review comments have been considered and resolved; and that the document is approved before issuance and use.

The review and approvals required for instructions, procedures and drawings will be established by the organization responsible for those documents. Reviews will be performed by knowledgeable personnel other than the originator. Review and approval will occur prior to issuance or implementation of the changed document.

17.2.6.4 Distribution and Use

Documents will be issued before the commencement of the activity to be controlled by that document. The mechanism for distribution will provide assurance that the controlled document arrives at the point of use; the user will provide assurance that the document to be used is the proper document and revision.

Discussion of Changes in the Quality Assurance Program Description

4. 17.2.9.1 Scope

Identification of the Change:

The last sentence of section 17.2.9.1, Scope, previously stated: "Nondestructive examinations will be performed under the direction of the Engineering Department by the Corporate Quality Assurance Department or IES Utilities Inc. approved suppliers." The phrase "the Corporate Quality Assurance Department or IES Utilities Inc. approved suppliers" is replaced with "personnel independent of the work and qualified in accordance with SNT-TC-1A".

Reason for the Change:

The essential detail of "who" actually performs nondestructive examinations is that personnel performing these examinations shall be SNT-TC-1A qualified. Further description is unnecessary.

Basis for Concluding that the Changed Quality Assurance Program Continues to Satisfy 10 CFR Part 50, Appendix B and Previous Quality Assurance Program Commitments

This change results in continued compliance with the provisions of 10 CFR Part 50, Appendix B, Criterion IX regarding the performance of nondestructive examinations. The policy for performing nondestructive examinations continues to be defined in the Quality Assurance Program Description. The examinations will continue to be performed under the direction of the Engineering Department. Furthermore, persons performing nondestructive examinations will continue to meet the qualification requirements of SNT-TC-1A, "Recommended Practice for Nondestructive Testing Personnel Qualification and Certification" consistent with the requirements of Regulatory Guide 1.58, "Qualification of Nuclear Power Plant Inspection, Examination, and Testing Personnel" and be independent of the activity (i.e., a welder will not examine their own welds). This change is not a reduction in commitment.

Any identification that will be obliterated or hidden by surface coatings or surface treatments will be reestablished or will be traceable by administrative means.

Standard catalog items or off-the-shelf items may be identified by catalog number or other appropriate designation.

17.2.8.3 Verification and Control

The items will be controlled and the identity of the item verified.

Inventory and storage controls will be established at the DAEC to ensure proper traceability of items.

The correctness of the item will be verified on withdrawal from storage and before the initiation of the repair, replacement, and modification.

17.2.9 CONTROL OF SPECIAL PROCESSES

17.2.9.1 Scope

Special processes are those controlled fabrications, tests, and final preparation processes that require the qualification of procedure, technique, and personnel and that are performed in accordance with applicable codes and standards. Certain special processes require interim in-process controls in addition to final inspection to ensure quality.

The control of special processes is the joint responsibility of the Engineering Department, the DAEC, and the Corporate Quality Assurance Department.

The Engineering Department is responsible for providing technical expertise relative to materials, metallurgy, welding, brazing, special processes and nondestructive examination (NDE). Nondestructive examinations will be performed under the direction of the Engineering Department by personnel independent of the activity and qualified in accordance with SNT-TC-1A.

17.2.9.2 General Requirements

Measures will be established to ensure that special processes are controlled and accomplished by qualified personnel using qualified procedures in accordance with applicable codes, standards, specifications, criteria, and other special requirements.

Written procedures will be reviewed or prepared before use to ensure that special processes are controlled and accomplished.

Discussion of Changes in the Quality Assurance Program Description

5. 17.2.10.1 Scope

Identification of the Change:

Changed the responsibility for receiving, in-process, and final inspections from the Quality Assurance organization to the Maintenance organization.

Reason for the Change:

Inspection responsibility is being transferred from the Quality Assurance organization to Maintenance organization as described in 17.2.1.2 above.

Basis for Concluding that the Changed Quality Assurance Program Continues to Satisfy 10 CFR Part 50, Appendix B and Previous Quality Assurance Program Commitments

The realignment of the staff performing inspections moves the responsibility for inspections from the Quality Assurance organization to the Maintenance organization. Inspections will continue to be performed by persons who are independent of the work.

The basis for this change is discussed in detail under section 17.2.1.2 above.

- material used
- procedure used (and qualifying procedure if different)
- tests performed and results
- date of application of coating
- traceability of coating location

17.2.10 **INSPECTION**

17.2.10.1 Scope

A program for the inspection of safety-related activities at the DAEC will be established and executed to verify conformance with applicable documented instructions, procedures, drawings, and specifications.

The responsibility for the receipt, in-process and final inspection of materials, parts, and components affecting quality is that of the Maintenance Department. The responsibility for the performance of nondestructive examinations is that of the Engineering Department.

17.2.10.2 General Requirements

A program for the inspection of activities affecting quality will be established and executed by or for the organization performing the activity to verify conformance with the documented instructions, procedures, and drawings for accomplishing the activity.

Inspection will be performed by individuals other than those who performed the activity being inspected. Inspections will be performed by personnel using appropriate equipment in accordance with applicable codes, standards, and procedures.

Procedures, instructions, or checklists will be established and used that identify the characteristics to be inspected, inspection methods, special devices, acceptance and rejection criteria, methods for recording inspection results, and groups responsible for the inspection. Special preparation, cleaning, and the use of measuring devices will be included.

Inspections will be planned to identify where in the sequence of work each inspection activity will be performed, to what extent, procedures to be used, and mandatory hold or witness points.

Repairs, modifications, or replacements will be inspected in accordance with the original inspection requirements or acceptable alternatives.

Discussion of Changes in the Quality Assurance Program Description

6. 17.2.15.1, Scope

Identification of the Change:

The second sentence of section 17.2.15.1, Scope, has been revised from "The responsibility for identification, documentation and segregation of nonconforming materials, parts, or components and notification to affected organizations, is that of the Corporate Quality Assurance Department." to "Nonconforming materials, parts or components shall be identified, documented and segregated, and notification shall be provided to affected organizations."

Reason for the Change:

Administration of the nonconformance control system for material receipt is the responsibility of the Material Management Organization (MMO) within the Engineering Department. Administrative responsibility for the nonconformance control system associated with plant operations (i.e., Action Requests) is the responsibility of the Licensing Department. All personnel are responsible for the identification and documentation of nonconforming conditions. Once such conditions are identified and documented, the respective organizations (MMO and Licensing) assure that the affected organizations are notified and control for tagging and segregation is implemented to prevent inadvertent use or installation.

Basis for Concluding that the Changed Quality Assurance Program Continues to Satisfy 10 CFR Part 50, Appendix B and Previous Quality Assurance Program Commitments

There is no change in the overall commitment; only identifies the groups which implement various aspects of the noncompliance control system. This change results in continued compliance with the provisions of 10 CFR Part 50, Appendix B, Criterion XV regarding the identification, documentation, and segregation of nonconforming materials, parts, or components and notification to affected organizations. This change is not a reduction in commitment.

inoperative, or malfunctioning structures, systems, and components will be documented and identified to prevent inadvertent use.

The Technical Specifications establish the status required for safe plant operation, including provisions for periodic and non-periodic tests and inspections, of various structures, systems, and components. Periodic tests may be operational tests or tests following maintenance, and non-periodic tests may be made following repairs or modifications.

17.2.14.5 Sequence Change Control

Procedures will include the control of the sequence of required tests, inspections, and other operations when important to safety. To change these controls, the individual procedure must be changed, which requires the same review and approval cycle as that which authorized the original procedure.

17.2.15 NONCONFORMING MATERIALS, PARTS, OR COMPONENTS

17.2.15.1 Scope

The nonconformance reporting system is established to control materials, parts or components which do not conform to requirements in order to prevent their inadvertent use or installation. Nonconforming materials, parts or components shall be identified, documented and segregated, and notification shall be provided to affected organizations. The responsibility for the disposition of the nonconforming materials, parts, or components is that of the Engineering Department, DAEC, and the Corporate Quality Assurance Department.

17.2.15.2 Identification and Segregation

The identification and segregation will be sufficient to prevent inadvertent use or installation of the nonconforming item. Material, parts, or components for which nonconformances have been identified will be immediately segregated, when practical, in areas that are reserved for nonconforming items. When segregation is impractical, administrative measures will be used, such as tagging, roping off the area, etc.

17.2.15.3 Reporting and Disposition

The reporting mechanism will provide the means to disposition the nonconforming material, part, or component.

The nonconformance report will identify the item, describe the nonconformance, and contain sufficient information to evaluate the nonconformance. The nonconformance report will be transmitted to the proper organization(s) for evaluation and disposition.

Discussion of Changes in the Quality Assurance Program Description

7. 17.2.16.4, Reporting of 10 CFR 21 Defects and Non-compliances

Identification of the Change:

A reference to the "President and Group Executive, Energy Delivery and Nuclear Group" is deleted from the third paragraph of this section.

Reason for the Change:

The previous description stated that both the President and Group Executive, Energy Delivery and Nuclear Group, and the Vice President, Nuclear are officers designated as responsible for reporting defects and non-compliances, as appropriate, to the NRC. The revised paragraph eliminates the designation of the "President and Group Executive, Energy Delivery and Nuclear Group" and designates only the "Vice President, Nuclear" as the officer responsible for reporting defects and non-compliances.

Basis for Concluding that the Changed Quality Assurance Program Continues to Satisfy 10 CFR Part 50, Appendix B and Previous Quality Assurance Program Commitments

In accordance with the provisions of 10 CFR 21.21(b)(1), "A director or responsible officer subject to the regulations of this part or a designated person shall notify the Commission when he obtains information reasonably indicating a failure to comply or a defect affecting..." This change to the Quality Assurance Program Description results in the identification of an officer or director, the Vice President, Nuclear, with responsibility for reporting of defects and non-compliances. This change results in continued commitment to comply with the provisions of 10 CFR Part 21, and the commitment continues to be defined in the Quality Assurance Program Description. There is no reduction in commitment.

action has been ineffective, significant trends adverse to quality, or significant Operational Quality Assurance Program deficiencies.

17.2.16.4 Reporting of 10 CFR 21 Defects and Non-compliances

A 10 CFR 21 defect and noncompliance is defined as one which could reasonably indicate a potential substantial safety hazard.

A procedure has been established, and appropriate posting provided in accordance with the provisions of 10 CFR Part 21, so that IES Utilities Inc. employees will be aware of the methods by which 10 CFR Part 21 defects and non-compliances are reported to the NRC.

The Vice President, Nuclear, is designated as the IES Utilities Inc. officer responsible for reporting defects and non-compliances, as appropriate, to the NRC.

17.2.17 **QUALITY ASSURANCE RECORDS**

17.2.17.1 Scope

Quality assurance records will be prepared, identified, collected, and protected so that adequate evidence of activities affecting quality is available.

17.2.17.2 Preparation and Identification of Quality Assurance Records

The organization responsible for the activity will also be responsible for the preparation and identification of the quality assurance records that attest to the quality of that activity.

As a general criterion, those documents that reflect the as-built condition of an item, component, system, or plant, and those documents that attest to the quality of an activity, item, structure, or system will be treated as quality assurance records. Also, the qualification records of inspection, examination and testing personnel, and quality assurance audit personnel, are classified as quality assurance records.

Quality assurance records will be legible, accurate, and complete.

17.2.17.3 Collection and Protection of Quality Assurance Records

The quality assurance records will be collected, indexed, classified and protected.

The organization that generates the quality assurance record will be responsible for collecting the records. The collected quality assurance records will be classified as either lifetime or non-permanent quality assurance records. The lack of a classification will mean that the quality assurance record is a lifetime record.

Discussion of Changes in the Quality Assurance Program Description

8. 17.2.18.2.2, Internal Organizations

Identification of the Change:

This section has been revised so that it lists only the audits performed under the cognizance of the Safety Committee. The frequency of audits has been uniformly established at 24 months unless a more frequent cycle is specified by regulation (except the triennial fire protection audit which remains as triennial). Audits performed outside the cognizance of the Safety Committee are no longer listed here.

Reason for the Change:

In the previous version of the UFSAR, the audits performed by the Quality Assurance Department for the Safety Committee were listed along with other audits performed in support of the Operational Quality Assurance Program. In Request for Technical Specification Change (RTS) 275 (letters NG-95-0538 (February 13, 1995) and NG-95-2007 (August 7, 1995)) IES Utilities Inc. committed to update the Quality Assurance Program Description during the next revision to clearly identify those audits which are performed under the cognizance of the Safety Committee. The change described here satisfies this commitment.

Establishing a uniform minimum audit frequency of 24 months, unless an alternate cycle is specified by regulation (e.g., fitness for duty audits every 12 months), will allow additional flexibility to adjust audit schedules based on the performance of the programs or organizations being audited. This change will allow the audit program to focus on programs or organizations with perceived weaknesses and thereby contribute to an improvement in overall performance of the facility. Any audits that the NRC requires to be conducted at a specified frequency will continue to be performed at that frequency unless a specific exemption has been obtained.

The previous listing in the UFSAR of other audits performed by Quality Assurance is unnecessary in view of the IES Utilities Inc. commitment to implement a comprehensive audit system as described in ANSI N18.7-1976/ ANS-3.2, paragraph 4.5. The audits performed by Quality Assurance are identified in the Quality Assurance Audit Schedule which is issued on a regular basis. That schedule and its implementation demonstrate the comprehensive scope of the Quality Assurance Audit Program through the variety, focus, and depth of activities selected for audit and listed on the schedule.

Basis for Concluding that the Changed Quality Assurance Program Continues to Satisfy 10 CFR Part 50, Appendix B and Previous Quality Assurance Program Commitments

The commitment to perform the audits listed in the Quality Assurance Program Description (QAPD) remains the same but the list has been changed. The audits performed under the cognizance of the Safety Committee are included within that commitment. Clearly identifying Safety Committee audits emphasizes the importance of the audits performed under the cognizance of the Safety Committee. Additionally, this change satisfies the commitment in Request for Technical Specification Change (RTS)-275 to identify clearly in the UFSAR those audits which

are performed under the cognizance of the Safety Committee which were previously specified in Technical Specifications.

The list of audits not under the cognizance of the Safety Committee has been removed because it is unnecessary. Audits required by the Quality Assurance program commitments, necessitate a comprehensive audit system and the performance of audits of all safety related activities over a period of 24 months, remains (Regulatory Guide 1.33, "Quality Assurance Program Requirements (Operation)" which endorses ANSI N18.7-1976/ANS-3.2, "Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants", paragraph 4.5). Only the listing is eliminated from the QAPD because this level of detail is more appropriate at the implementation level such as departmental procedures and/or audit schedules.

In summary, these changes do not affect the continued commitment to comply with the provisions of 10 CFR Part 50, Appendix B, Criterion XVIII regarding the implementation of a comprehensive audit program This is also consistent with the DAEC commitment to Regulatory Guide 1.33 to audit safety-related activities over a period of two years. The Quality Assurance Program Description continues to describe accurately an effective Quality Assurance Audit Program.

These changes are not a reduction in commitment.

The audit program will be sufficient to verify compliance with the Operational Quality Assurance Program and to determine the effectiveness of the Operational Quality Assurance Program.

The responsibility for the audit system will be that of the Corporate Quality Assurance Department, the Safety Committee, and the Vice President - Nuclear.

17.2.18.2 Audit System

The audit system will be applied to those organizations, both external and internal to IES Utilities Inc., that are involved in safety-related activities.

17.2.18.2.1 External Organizations

The audit program for suppliers is the responsibility of the Corporate Quality Assurance Department. Audits will be scheduled at a frequency commensurate with the status and importance of the activity.

In general, the audit schedule will be responsive to the performance of audits before the initiation of an activity to ensure that the proper controls are in place, during the early stages of the activity to determine that the proper controls are being implemented, and near the end of the activity to determine that all specified requirements have been met.

In general, the audit schedule will also include the performance of audits during the activity, assuming that the activity occurs over a sufficient length of time, to determine that the proper controls are being applied and no problems are occurring.

17.2.18.2.2 Internal Organizations

The audit program for the internal IES Utilities Inc. organizations is the responsibility of the following:

1. The Corporate Quality Assurance Department, to determine the compliance of the other organizations to the Operational Quality Assurance Program and to evaluate performance.

2. The Safety Committee, to determine the compliance of the DAEC to the Technical Specification requirements and license provisions and to evaluate performance.

3. The Vice President, Nuclear, to determine the overall effectiveness of the Operational Quality Assurance Program.

A prominent factor in developing and revising audit schedules will be performance in the subject area. The audit schedule will be revised so that weak or declining areas get increased audit coverage and strong areas receive less coverage.

An audit of safety related functions will be performed at least once per 24 months, except where a specific frequency is listed. Other audits will be performed as required by regulations. Audits of facility activities performed under the cognizance of the Safety Committee include:

- The conformance of facility operation to provisions contained within the Technical Specifications and applicable license conditions.
- The performance, training and qualifications of the facility staff.
- The results of actions taken to correct deficiencies occurring in facility equipment, structures, systems, or method of operation that affect nuclear safety.
- The performance of activities required by the Quality Assurance Program to meet the criteria of Appendix "B", 10 CFR Part 50.
- The DAEC fire protection program and implementing procedures. An independent fire protection and loss prevention inspection and audit will be performed annually utilizing either qualified offsite licensee personnel or an outside fire protection firm. An inspection and audit by an outside qualified fire consultant will be performed at intervals no greater than three years.
- Any other area of facility operation considered appropriate by the Safety Committee or the President.
- The radiological environmental monitoring program and the results thereof.
- The Offsite Dose Assessment Manual and implementing procedures.
- The Process Control Program and implementing procedures.
- The performance of activities required by the QC Program for effluent and the vendor's QA Program for radiological environmental monitoring.
- Design change package safety evaluations.

Audit reports for audits performed under the cognizance of the Safety Committee will be forwarded to the President and to the management position responsible for the areas audited within 30 days after completion of the audit.

Discussion of Changes in the Quality Assurance Program Description

9. Page A-5; Position Paragraph 6.7 on Regulatory Guide 1.33

Identification of the Changes:

Add a reference in Position 6.7 to ANSI 18.7 - 1976/ANS - 3.2 to improve clarity and remove the phrase "consistent with the DAEC Technical Specifications" from the last line of the Position.

Reason for the Changes:

The phrase "consistent with the DAEC Technical Specification" is unnecessary since the Facility Operating License of course requires compliance with the Technical Specifications (see Section 2.C.(2) of the Facility Operating License). The clarification of this paragraph provides for consistency between ANSI N18.7 - 1976/ANS - 3.2 section 5.2.2 and Technical Specification 6.8.3 with respect to the use of a licensed senior operator (not on shift) to review and approve temporary changes to procedures governed by these two documents. This change eliminates previous confusion created with respect to the approval requirements for temporary changes to administrative procedures which are not subject to the provisions of the Technical Specifications.

Basis for Concluding that the Changed Quality Assurance Program Continues to Satisfy 10 CFR Part 50, Appendix B and Previous Quality Assurance Program Commitments

Deletion of the phrase does not compromise the commitment to comply with the provisions of ANSI N18.7 - 1976/ANS - 3.2, Section 5.2.2, and Technical Specification 6.8.3 regarding the approval of temporary procedures by a licensed senior operator. This change is administrative in nature and is not a reduction in commitment.

6.5 With respect to Section 4.3.4 (1), Subjects Requiring Independent Review, of ANSI N18.7-1976/ANS-3.2, the DAEC Safety Committee is not required to review safety evaluations of changes in the facility which are completed under 10 CFR Part 50.59.

6.6 Section 5.1 (Program Description) of ANSI N18.7-1976/ANS-3.2 requires a "summary document" for the Quality Assurance Program. The QAPD and Appendix A thereto fulfill this requirement for IES Utilities Inc.

6.7 Section 5.2.2 (Procedure Adherence) of ANSI N18.7-1976/ANS-3.2 states that temporary procedure changes which do not change the intent of the procedure are required to be approved by two members of the plant staff, of which one shall hold a senior operators license. In lieu of one of these members being the on-shift senior operator, a non-shift senior licensed operator may approve of these temporary changes.

6.8 Not Used

6.9 Section 5.2.7 (Maintenance and Modifications) of ANSI N18.7-1976/ANS-3.2 lists six standards that are to be applied to activities occurring during the operational phase that are comparable to related activities during design and construction. Five of these standards are addressed elsewhere in this Appendix A.

IES Utilities Inc. does not follow one of those listed, ANSI N101.4-1972, Quality Assurance for Protective Coatings Applied to Nuclear Facilities. See UFSAR Section 17.2.9.5 for IES Utilities Inc.'s controls relative to "Special Protective Coatings".

6.10 With respect to Section 5.2.9 (Plant Security and Visitor Control) of ANSI N18.7-1976/ANS-3.2, the DAEC Security Plan meets the stated requirements.

However, the Standard references ANSI N18.17 for guidance. IES Utilities Inc. is not committed to ANSI N18.17. The DAEC Security Plan complies with 10 CFR Part 73.

6.11 Section 5.2.15 (Review, Approval and Control of Procedures) of ANSI N18.7-1976/ANS-3.2, fourth paragraph requires:

"Plant procedures shall be reviewed by an individual knowledgeable in the area affected by the procedure no less frequently than every two years to determine if changes are necessary or desirable."

This requirement is replaced by the following:

"Plant procedures shall be reviewed, in accordance with the following, to determine if changes are necessary or desirable:

Discussion of Changes in the Quality Assurance Program Description

10. Page A-8; Position 11.2 on Regulatory Guide 1.58

Identification of the Change:

In the first paragraph of position 11.2, the reference to the paragraph, "Applicability" is corrected to 1.2.

The second paragraph of 11.2 is replaced with the following:

The qualification of inspection personnel shall be documented on the basis of either this standard (i.e., ANSI N45.2.6-1978) or on the basis of task qualification in accordance with Regulatory Guide 1.8, Revison 1-R, May 1977 and ANSI/ANS 3.1-1978. The basis for deciding which method is used for qualification is described below:

- Personnel performing inspections as of October 1, 1995, are certified to this standard (ANSI N45.2.6-1978) for the performance of inspections.

- Personnel contracted to perform inspections at the DAEC will continue to be qualified for the performance of inspections in accordance with this standard (ANSI N45.2.6-1978).

- Effective with the approval of Revision 16 to the DAEC Quality Assurance Program Description, craft personnel may become qualified to perform inspection by the successful completion of training for that task. For example, the performance of dimensional measurements by a craftsperson in the performance of a repair activity is an equivalent task performed by an inspector qualified in accordance with ANSI N45.2.6-1978 for performing dimensional measurements. In addition to this task qualification, craft personnel qualified in accordance with this method shall also receive an annual eye examination for vision and color acuity.

- Personnel performing testing activities shall have appropriate experience and training to assure competence in accordance with Regulatory Guide 1.8 (ANSI/ANS 3.1-1978).

Reason for the Change:

The paragraph number change simply corrects an error in the reference.

The changes in qualification requirements applicable to personnel performing inspections support the objective of IES Utilities to integrate the inspectors with the crafts and move toward a peer inspection program. These changes will accommodate a transitional period as the DAEC evolves to a peer inspection program.

Discussion of Changes in the Quality Assurance Program Description

Basis for Concluding that the Changed Quality Assurance Program Continues to Satisfy 10 CFR Part 50, Appendix B and Previous Quality Assurance Program Commitments

10 CFR 50 Appendix B, Criterion II, Quality Assurance Program, requires: "The program shall provide for indoctrination and training of personnel performing activities affecting quality as necessary to assure that suitable proficiency is achieved and maintained."

One method for satisfying this criterion which is acceptable to the NRC is Regulatory Guide 1.58. It endorses ANSI N45.2.6-1978 to which IES Utilities Inc. has been committed. The above changes result in a change in commitment away from ANSI N45.2.6-1978 to a performance based approach for the qualification of personnel which is consistent with Regulatory Guide 1.8 (ANSI/ANS 3.1-1978) requirements and is also an acceptable method. The significance of this change is how the inspection program is implemented. The commitment to a qualified workforce and to independent inspections of safety-related activities is unchanged. Therefore, the inspection program continues to satisfy Criterion X, "Inspection" of 10 CFR Part 50, Appendix B. This change is not a reduction in commitment.

9.0 REGULATORY GUIDE 1.39, "Housekeeping Requirements for Water-Cooled Nuclear Power Plants"

COMMENTS AND CLARIFICATIONS:

IES Utilities Inc. complies with the Regulatory Position of this Regulatory Guide with the following clarification:

9.1 The IES Utilities Inc. commitment is to Regulatory Guide 1.39, Revision 2, September 1977, and to ANSI N45.2.3-1973 which it endorses.

10.0 REGULATORY GUIDE 1.54, "Quality Assurance Requirements for Protective Coatings Applied to Water-Cooled Nuclear Power Plants"

COMMENTS AND CLARIFICATIONS:

IES Utilities Inc. is not committed to Regulatory Guide 1.54, June 1973. IES Utilities Inc.'s controls relative to protective coatings are contained in UFSAR Section 17.2.9.5.

11.0 REGULATORY GUIDE 1.58, "Qualification of Nuclear Power Plant Inspection, Examination, and Testing Personnel"

COMMENTS AND CLARIFICATIONS:

IES Utilities Inc. complies with the Regulatory Position of this Regulatory Guide with the following clarifications:

11.1 The IES Utilities Inc. commitment is to Regulatory Guide 1.58, Revision 1, September 1980, and to ANSI N45.2.6-1978 which it endorses.

11.2 ANSI N45.2.6-1978 Section 1.2, "Applicability", first paragraph, states that this standard applies to personnel who perform inspections, examinations, and tests during fabrication prior to and during receipt of items at the construction site, during construction, during preoperational and startup testing, and during operational phases of nuclear power plants.

The qualification of inspection personnel shall be documented on the basis of either this standard (i.e., ANSI N45.2.6-1978) or on the basis of task qualification in accordance with Regulatory Guide 1.8, Revision 1-R, May 1977 and ANSI/ANS 3.1 - 1978. The basis for deciding which method is used for qualification is described below:

- Personnel performing inspections as of October 1, 1995, are certified to this standard (ANSI N45.2.6-1978) for the performance of inspections.

- Personnel contracted to perform inspections at the DAEC will continue to be qualified for the performance of inspections in accordance with this standard (ANSI N45.2.6-1978).

- Effective with the approval of Revision 16 to the DAEC Quality Assurance Program Description, craft personnel may become qualified to perform inspection by the successful completion of the training for that task. For example, the performance of dimensional measurements by a craftsperson in the performance of a repair activity is an equivalent task performed by an inspector qualified per ANSI N45.2.6 - 1978 for performing dimensional measurements. In addition to this task qualification, craft personnel qualified in accordance with this method shall also receive an annual eye examination for vision and color acuity.

- Personnel performing testing activities shall have appropriate experience and training to assure competence in accordance with Regulatory Guide 1.8 (ANSI/ANS 3.1-1978).

11.3 ANSI N45.2.6 Section 1.2, "Applicability", third paragraph, requires that this standard be used in conjunction with ANSI N45.2. IES Utilities Inc. is not committed to ANSI N45.2.

11.4 ANSI N45.2.6 Section 1.2, "Applicability", fourth paragraph, requires that this standard be applied to organizations other than IES Utilities Inc. The specific applicability of this standard to other organizations is specified on a case-by-case basis in the procurement documents issued to those suppliers of materials and services.

11.5 Regulatory Guide 1.58 Revision 1, in Section B, "Discussion", endorses ASNT Recommended Practice No. SNT-TC-1A-1975 for the qualification of nondestructive testing personnel. In accordance with the IES Utilities Inc. ASME Section XI program the 1980 Edition with addenda through Winter 1981 govern. Section IWA-2300 of this Code requires nondestructive personnel to be qualified to SNT-TC-1A-1980.

In accordance with Regulatory Guide 1.147, ASME Code Case N-356, and IES Utilities Inc. ASME Section XI Relief Request NDE-006, the recertification period for NDE Level III personnel shall be every five years as opposed to the three years as stated in SNT-TC-1A-1980, paragraph 9.7.1.

Discussion of Changes in the Quality Assurance Program Description

11. Page A-8; Position 11.3 on Regulatory Guide 1.58

Identification of the Change:

Paragraph 11.3 has been deleted. It addressed the qualification requirements applicable to personnel who approve preoperational, startup, and operation test procedures and test results and who direct or supervise the conduct of individual preoperational, startup, and operational tests. Subsequent paragraphs were renumbered. It also provided specific direction regarding a committee which reviewed and approved test procedures.

Reason for the Change:

Section 11 states that IES Utilities Inc. complies with the Regulatory Position of Regulatory Guide 1.58 (Rev 1). There is no need to elaborate on that commitment with the detail previously stated in paragraph 11.3. Changes in the inspection program make it unnecessary for the Quality Assurance organization to participate on the committee which reviews and approves preoperational, startup, and operational tests.

Basis for Concluding that the Changed Quality Assurance Program Continues to Satisfy 10 CFR Part 50, Appendix B and Previous Quality Assurance Program Commitments

Paragraph 11.3 in UFSAR 17.2 Appendix A Revision 15 identifies a commitment to a particular Regulatory Position (C.1) in Regulatory Guide 1.58 regarding "the qualification of personnel (1) who approve preoperations, startup, and operation test procedures and test results and (2) who direct or supervise the conduct of individual preoperational, startup, and operational tests". IES Utilities Inc.'s overall commitment to Regulatory Guide 1.58 obviates the need for attention to Position C.1. The additional information provided in paragraph 11.3 of revision 15 regarding the review and approval of test procedures is addressed elsewhere in UFSAR 17.2 (e.g. 17.2.11.2 and 17.2.6.3). Qualified personnel, as identified in our commitment to N18.1, continue to perform these activities. Tests continue to be monitored by the Quality Assurance Organization as described in 17.2.18.

The commitment to comply with the provisions of 10 CFR Part 50, Appendix B, ANSI/ANS 3.1 - 1978 and ANSI N45.2.6 - 1978 regarding the qualification of personnel performing testing continues and is explicitly stated in the Quality Assurance Program Description. This change is not a reduction in commitment.