

Attachment 1

Affected pages from the DAEC UFSAR Chapter 17.2,  
Revision 17, date to be determined.

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, Regulatory Performance

The Manager, Regulatory Performance reports to the Vice President - Nuclear and is responsible for quality assurance, emergency planning and nuclear licensing functions. Reporting to the Manager, Regulatory Performance are the Manager, Corporate Quality Assurance, Manager, Emergency Planning and Supervising Engineer, Licensing.

#### 17.2.1.3 Manager, Corporate Quality Assurance

The Manager, Corporate Quality Assurance reports to the Manager, Regulatory Performance and is assigned the primary responsibility for ensuring that quality requirements relative to the safe operation of the DAEC are identified and met. The Manager, Corporate Quality Assurance also has the authority and organizational freedom to directly access the Vice President - Nuclear regarding quality matters. The Manager, Corporate Quality Assurance is responsible for elevating conflicts regarding quality matters with the Manager, Regulatory Performance to the Vice President, Nuclear for resolution.

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, approving 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.

- 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.
- 18.5 In lieu of an annual supplier evaluation specified by Regulatory Position C.3.b(2), a documented ongoing evaluation of the supplier should be performed. Where applicable, this evaluation should take into account (1) review of supplier-furnished documents such as certificates of conformance, non-conformance notices, and corrective actions, (2) results of previous source verifications, audits, and receiving inspections, (3) operating experience of identical or similar products furnished by the same supplier, and (4) results of audits from other sources, e.g., customer, ASME, or NRC audits. The results of the evaluations should be reviewed and appropriate corrective action should be taken. Adverse findings resulting from these evaluations should be periodically reviewed in order to determine if, as a whole, they result in a significant condition adverse to quality and to provide input to support supplier audit activities conducted by IES Utilities or a third party auditing entity.

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

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.
- 19.3 In lieu of ANSI N45.2.23 Section 2.3.4, prospective lead auditors shall demonstrate their ability to effectively implement the audit process and effectively lead an audit team. This demonstration process shall be described in written procedures or instructions. The demonstration shall be evaluated and the results documented. Regardless of the methods used for the demonstration, the prospective lead auditor shall have participated in at least one nuclear quality assurance audit within the year preceding the individual's effective date of qualification. Upon successful demonstration of the ability to effectively implement the audit process and effectively lead audits, and having met the other provisions of Section 2.3 of ANSI N45.2.23 - 1978, the individual may be certified as being qualified to lead audits.

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.

Attachment 2

Discussion of Changes in the  
Quality Assurance Program Description

Discussion of Changes  
in the Quality Assurance Program Description

**Identification of Change:**

The DAEC current commitment to Regulatory Guide 1.144 Revision 1 1980 (c.3.b.2) is as follows:

A documented evaluation of the supplier should be performed annually. Where applicable, this evaluation should take into account (1) review of supplier-furnished documents such as certificates of conformance, nonconformance notices, and corrective actions, (2) results of previous source verifications, audits, and receiving inspections, (3) operating experience of identical or similar products furnished by the same supplier, and (4) results of audits from other sources (e.g., customer, ASME, or NRC audits).

The DAEC revised commitment is stated in the revised 17.2 A-13 paragraph 18.5 (of this submittal).

**Reason for Change:**

DAEC has developed more effective and efficient practices for conducting the reviews recommended in Regulatory Guide 1.144 Revision 1, 1980. The DAEC's operating experience and the operating experience of other licensee's is included in supplier evaluations (as applicable). As a Nuclear Procurement Issues Committee (NUPIC) member the DAEC receives significant information as a result of audits performed by other members. The significant information is included in the supplier evaluation process on a real time basis. An additional annual review is an unnecessary resource burden because the function and purpose of the review has already been accomplished. Reliance for effective control over supplier quality is better placed on real time evaluations than by deferring reviews to one selected time frame.

These activities may result in some supplier evaluations being performed more frequently than annually to address the operating experience, etc. (categories of information identified above), and for some suppliers the evaluation period may be extended, commensurate with actual procurement activity.

**Basis for Concluding the Change Continues to Comply with 10 CFR 50  
Appendix B and Previous Commitments:**

10 CFR 50 Appendix B, Criterion VII, "Control of Purchased Material, Equipment and Services", requires:

"The effectiveness of the control of quality by contractors and subcontractors shall be assessed by the applicant or designee at intervals consistent with the importance, complexity, and quantity of the product or services."



Discussion of Changes  
in the Quality Assurance Program Description

This requirement continues to be met through the performance of an on-going evaluation system versus a delayed process of an annual evaluation. Existing DAEC practices are performing the function described in Regulatory Guide 1.144 Revision 1, 1980 more effectively and efficiently through an on-going evaluation process.

Other considerations supporting the basis for the change are:

1. Nuclear Energy Institute (NEI) Prepared Improvements to Quality Assurance Program (NEI letter dated January 30, 1996 to Suzanne C. Black of the Nuclear Regulatory Commission).
2. Letter dated October 24, 1996, from Suzanne C. Black of the NRC to Stephen Floyd (NEI).

This change is a reduction in commitment. The evaluation function is being performed in a more efficient, effective and productive manner that enhances safety through a more expedient assessment of potential deficiencies.

2.0 Page A-13; Position 19.3 on Regulatory Guide 1.146

Background:

The process of becoming a Lead Auditor is defined by ANSI N45.2.23-1978, "Qualification of Quality Assurance Program Audit Personnel for Nuclear Power Plants" as endorsed by NRC Regulatory Guide 1.146 of August 1980. This standard also incorporates the requirements of ANSI N45.2.12 which defines the process by which audits are performed.

As defined by ANSI N45.2.23, the process of becoming Lead Auditor certified is essentially composed of three parts:

- Candidate's prior education and experience, professional accomplishments, and some discretion by management in regards to the candidates maturity, etc., to achieve 10 or more points within the system defined by section 2.3.1.



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- Candidate receives, or is evaluated and found to already have, knowledge of quality assurance program requirements as defined by section 2.3.3. This section addresses knowledge and understanding of ANSI N45.2 standards, and other applicable standards, general understanding of 10 CFR 50 Appendix B, auditing techniques, and audit planning. Then as stated by section 2.3.3.5, on-the-job training is required to demonstrate an understanding of the audit process. The lead auditor candidate is also required to take an examination to evaluate the candidate's knowledge of these requirements.
- The candidate is required to demonstrate their capabilities by participation in the performance of audits as defined by section 2.3.4.

From the above chronology, the process of lead auditor qualification is composed of prior knowledge and experience, knowledge obtained in the quality assurance processes, and demonstrated performance. This approach to lead auditor qualification is a systematic approach and ensures an individual has demonstrated their ability to lead audits prior to being lead auditor certified. Section 2.3.4, "Audit Participation" currently states: "The Prospective Lead Auditor shall have participated in a minimum of five (5) quality assurance audits within a period of time not to exceed three (3) years prior to the date of qualification, one audit of which shall be a nuclear quality assurance audit within the year prior to his qualification." In addition, there are other approaches that address the same objective, based on the candidate being able to demonstrate competency as a lead auditor.

**Identification of Change:**

Section 2.3.4 is replaced with:

"Prospective Lead Auditors shall demonstrate their ability to effectively implement the audit process and effectively lead an audit team. Upon successful demonstration of the ability to effectively implement the audit process and effectively lead audits and having met the other provisions of Section 2.3 of ANSI N45.2.23-1978, licensee management may certify the individual as a Lead Auditor." This prospective Lead Auditor shall have participated in at least one nuclear quality assurance audit within the year preceding the individuals effective date of qualification.

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in the Quality Assurance Program Description

**Reason for Change:**

Currently, section 2.3.4, ANSI N45.2.23 for Audit Participation does not ensure a lead auditor has the necessary skills prior to certification. The standard requires "participation" in five audits and does not require a prospective lead auditor to demonstrate their skills as a lead auditor during the five audits in which they "participate". An individual may have related experience and be capable of demonstrating their skills to lead an audit in less than five audits, but the standard does not permit a licensee to certify such an individual until the individual had "participated" in at least five audits. The objective of this section of the standard is for the prospective lead auditor to demonstrate the ability to lead audits. The prospective lead auditor may need less than, or more than, five audits to demonstrate adequate on-the-job performance for certification depending on the abilities of the individual.

As the nuclear industry moves into the performance based regime for audits, many utilities have established rotation programs, or similar programs to broaden personnel experience by working in different areas, e.g., auditing. These individuals are generally capable of demonstrating their ability to effectively lead audits in less than five audits, but because of the restrictive nature of section 2.3.4 of ANSI N45.2.23, they must continue to be supervised to comply with these provisions. This is unnecessary and is not an effective utilization of licensee resources.

Licensee management should be permitted to assess the performance of the prospective lead auditor against the knowledge and performance criteria described in the ANSI standards; knowledge of the audit process, knowledge of the licensee's quality assurance program, knowledge of the requirements of 10 CFR 50 Appendix B, knowledge of applicable and pertinent sections of industry standards, the candidates demonstrated performance in implementing the audit process (including leading), demonstrated oral and written communication skills, and demonstrated interpersonal skills interacting with other departments within the Company or supplier organizations.

**Basis for Concluding the Change Continues to Comply With 10 CFR 50 Appendix B and Previous Quality Assurance Program Commitments:**

The proposed change continues to require demonstrated performance by the individual prior to certification as a lead auditor but provides management the flexibility to certify the individual, once the skills have been demonstrated. This is consistent with 10 CFR 50 Appendix B, criterion II, Quality Assurance Program, which requires a program be defined for the indoctrination and training of personnel performing activities affecting quality as necessary to assure that suitable proficiency is achieved and maintained. This

Discussion of Changes  
in the Quality Assurance Program Description

is also consistent with 10 CFR 50 Appendix B, criterion XVIII, Audits, which requires audits to be performed by appropriately trained personnel.

Other considerations supporting the basis for change are:

1. Nuclear Energy Institute (NEI) Proposed Improvements to Quality Assurance Program (NEI letter dated January 30, 1996 to Suzanne C. Black of the Nuclear Regulatory Commission).
2. Letter dated October 24, 1996 from Suzanne C. Black of the NRC to Stephen Floyd (NEI).

This change is a reduction in commitment.

Attachment 3

Mark-up of USFAR Section 13.1,  
"Conduct of Operations"

## UFSAR/DAEC-1

### Chapter 13 CONDUCT OF OPERATIONS

#### 13.1 ORGANIZATIONAL STRUCTURE OF IES UTILITIES, INC.

IES Utilities, Inc. (formerly Iowa Electric Light and Power Company) is responsible for all station operations from the start of preoperational testing and is responsible for using properly licensed personnel to operate the plant. Technical assistance and direction during the preoperational testing, initial core loading, startup, and precommercial testing was provided by Bechtel Corporation (Bechtel) and the General Electric Company (GE). Technical assistance is made available as required during plant operation.

The DAEC Plant Manager is responsible for the safe, reliable, and efficient operation of the facility. He has a staff of trained and properly licensed personnel to accomplish all of the various plant functions and disciplines. All phases of plant operation are performed in accordance with written and approved operation, maintenance, radiation protection, and emergency procedures. These procedures factor in all available experience encountered in the startup and operation of earlier boiling-water reactor (BWR) plants. Significant operations, tests, and pertinent information are recorded and a file of these records is maintained.

A training program to qualify the staff to satisfy the then existing Atomic Energy Commission (AEC) license requirements for the initial fuel loading, preliminary testing, and commercial operation was carried out. Training, retraining, and licensing has continued after startup to ensure an adequate number of licensed operators and properly trained replacement personnel for all disciplines.

A Safety Committee has been established to advise the President, <sup>and</sup> Chief Operating ~~and~~ Chief Financial Officer on the status of nuclear safety and make recommendations regarding major procedure, facility, and license modifications, and to conduct periodic safety reviews on the site. An Operations Committee consisting of plant supervisory personnel makes recommendations to the DAEC Plant Manager, reviews plant operations in detail, and approves procedure changes involving nuclear safety. Records of the proceedings of both committees are maintained.

##### 13.1.1 MANAGEMENT AND TECHNICAL SUPPORT ORGANIZATION

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### 13.1.1.1 Design and Operating Responsibilities

#### 13.1.1.1.1 Design and Operating Responsibilities - Project Phase

The Design and Operating responsibilities for the DAEC during the project phase were described in Section 1.1.2.1 of the original FSAR.

#### 13.1.1.1.2 Technical Support for Operations

Management and technical responsibility for the operation of the DAEC resides in the Nuclear Generation Division. This Division is responsible for the integration of licensing, engineering and technical support, and operation of the DAEC. The Engineering Department within the Nuclear Generation Division is responsible for providing engineering and technical support for the DAEC.

DAEC depends on consultant assistance from specialized consulting companies. Work activities are authorized by the Vice President, Nuclear, or his designated alternate. Work may be authorized by purchase order or letter.

Offsite senior management resources are readily available by virtue of the proximity of the DAEC to the IES Utilities, Inc. corporate offices.

### 13.1.1.2 Organizational Arrangement

#### 13.1.1.2.1 Corporate Organization

IES Utilities, Inc., which is a subsidiary of IES Industries, Inc., is organized into divisions, departments, groups, and committees, which are unique entities that have been assigned specific responsibilities. The corporate organizational arrangement is shown in Figure 13.1-1. The Vice President, Nuclear and the Vice President, Technical Services and their respective organizations and the Safety Committee, report to the President, Chief Operating and Chief Financial Officer and have responsibilities that are germane to the safe operation of the DAEC.

#### Chairman of the Board and Chief Executive Officer

The Chairman of the Board and Chief Executive Officer of IES Industries, Inc., has general supervision of the Company's business affairs and performs such other duties as required by the Board of Directors and the Executive Committee.

*Vice President, Administration*

*and IES Utilities Inc.*



*and*  
President, ~~Chief Operating and Chief Financial Officer.~~

*IES Industries, Inc. and*

The President, *and* Chief Operating ~~and Chief Financial~~ Officer of IES Utilities, Inc. directs the Company's affairs, subject to policies and directives formulated by the Board of Directors and Executive Committee.

*and*  
The President, ~~Chief Operating and Chief Financial~~ Officer assigns to other corporate officers the authority to conduct the Company's operations. He is responsible for all of the operating, maintenance, and facility expansion activities in the Company.

*He President and Chief Operating Officer*  
His responsibilities include, but are not limited to: the management of engineering, design, construction and contractual execution of all expansion or revisions of physical plant facilities; the management of all electrical generation facilities, including fuel supply to support these functions; and the management of all gas department activities, including the wholesale purchases of same.

*He President and Chief Operating Officer*  
He is responsible for all marketing and commercial activities and for the inter-Company relations, including wholesale sales and purchases, other utility and REA relations, and Regional and/or business and professional organizational participation.

*and*  
The President, ~~Chief Operating and Chief Financial~~ Officer endorses the Operational Quality Assurance Program, ~~and has the responsibility and authority for the review and approval of the Operational Quality Assurance Program. This function is a management review, not a line function.~~

*Policy,*

#### 13.1.1.2.2. Nuclear Generation Division Organization

##### Vice President, Nuclear

*and*  
The Vice President, Nuclear reports to the President, ~~Chief Operating and Chief Financial~~ Officer. The Nuclear Generation Division Organization is shown in Figure 13.1-1.

The primary responsibility of the Vice President, Nuclear is the safe operation of the DAEC. Other responsibilities include, but are not limited to, the following:

1. Managing the Nuclear Generation Division, which is responsible for:
  - a. Operation and maintenance of the DAEC
  - b. Regulatory agency interfaces and relations.



- c. Licensing activities.
  - d. Emergency planning activities.
  - e. Nuclear fuel management activities.
  - f. Nuclear facility engineering activities, including consultive or special engineering requirements and the special consultant support that may be necessary to ensure the most effective operation.
  - g. Training of nuclear personnel.
  - h. Outage planning and scheduling.
2. Maintaining relationships and integration with the co-owners of the nuclear facilities.

Assistant Vice President, Nuclear

The Assistant Vice President, Nuclear reports to the Vice President, Nuclear and performs certain activities delegated by the Vice President. The Assistant Vice President acts in behalf of the Vice President in his absence.

13.1.1.2.2.1 Duane Arnold Energy Center

To achieve the objective of safe operation of the DAEC, the Nuclear Generation Division has been given specific assignments for operation, engineering, licensing, and emergency planning, and the procurement of nuclear fuel. These responsibilities are distributed among the organizations within the division. These include the Engineering Department, Nuclear Licensing Department, Emergency Planning Department, Nuclear Training Department, Outage and Support Group, Business Unit and the Duane Arnold Energy Center (see Figure 13.1-1).

Engineering Department

*and has*  
The Manager of Engineering is assigned the primary responsibility for the design changes and engineering relative to the safe operation of the DAEC. He reports to the Vice President, Nuclear. His responsibilities include, but are not limited to, the following:

- 1. Planning, designing and construction of all facility changes at the DAEC.

*Insert A*

## Insert A:

### i. Overall effectiveness of the Quality Assurance Program

Specific quality programs responsibilities include:

- approval of the Quality Assurance Manual
- conducting an evaluation of the effectiveness of the Quality Assurance Program every 5th year, alternating with the Safety Committee
- supporting the Manager, Corporate Quality Assurance in the resolution of conflicts regarding quality matters with the Manager, Regulatory Performance
- and reserve the authority to conduct or order the auditing of any activity at any time to determine compliance to the Quality Assurance Manual

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2. Supervising project engineering activities assigned to the Nuclear Generation Division. This includes the implementation of appropriate project financial and schedular control.
3. Assisting in negotiations involving Nuclear Generation Division projects in achieving compliance with legal and regulatory requirements.
4. Coordination of those activities associated with maintaining those engineering documents, drawings, specifications, manuals, and computer software and databases necessary to support the day-to-day activities within the Nuclear Generation Division.
5. Providing specialized engineering support to the organization in such areas as Systems, Procurement, Analysis, ASME, ISI, IST, Environmental Qualification (EQ), Maintenance, etc.
6. Preparing and maintaining lists that denote the specific safety-related structures, systems, and components.
7. Receipt, storage and issuance of spare parts and materials utilized in the operation and maintenance of the DAEC. *This includes inventory control and issuance of part numbers for the Bill of Materials program.*

A description of organizational responsibilities are contained within the Nuclear Generation Division Procedures.

### Nuclear Licensing, Emergency Planning and Quality Assurance

The Manager, <sup>Regulatory Performance</sup> ~~Nuclear Licensing~~, reports to the Vice President, Nuclear. <sup>and has</sup> His responsibilities include, but are not limited to, the following: <sup>responsibility for the area of Nuclear Licensing, Emergency Planning, and Quality Assurance activities.</sup>

1. Managing nuclear licensing activities regarding the DAEC to ensure compliance with regulatory requirements.
2. Maintaining the Updated Final Safety Analysis Report and preparing the periodic submittal of revisions in accordance with 10 CFR 50.71(e) requirements.
3. Preparation and submittal of any necessary changes to the DAEC Operating License and/or Technical Specifications in accordance with 10 CFR 50.90, §50.91 and §50.92.

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*The Supervising Engineer, Nuclear Licensing reports to the Manager, Regulatory Performance. Responsibilities for Nuclear Licensing include, but are not limited, to the following:*

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4. Assigning the responsibility for the evaluation of Inspection and Enforcement Bulletins, Generic Letters and Regulatory Guides. Such evaluations will determine applicability to the DAEC and the necessity for establishing a DAEC position.
5. Investigating plant incidents to determine root cause and recommend corrective actions to plant management, assist in the determination of the reportability of such events pursuant to 10 CFR 50.72 and 50.73 requirements and prepare Licensee Event Reports (LER) in accordance with 10 CFR 50.73 requirements.
6. Performing Post Scram reviews and making recommendations to the Operations Committee for plant re-start in accordance with NRC Generic Letter 83-28, Item 1.1 requirements.
7. Coordinating the dissemination and review of Industry Operating Experience on site.

A description of organizational responsibilities <sup>are</sup> is contained in the Nuclear Generation Division Procedures.

### Emergency Planning

*Manager, Regulatory Performance*  
The Manager, Emergency Planning, reports to the Vice President, Nuclear and is assigned the primary responsibility for Emergency Planning activities for the Nuclear Generation Division, both onsite and offsite. The purpose of the DAEC onsite and offsite plans is to ensure that the public is adequately protected in the event of a radiological emergency at the DAEC. The Manager, Emergency Planning, is designated as the primary contact with the NRC, State of Iowa and the Federal Emergency Management Agency (FEMA) in matters affecting the emergency plans and implementing procedures.

### Duane Arnold Energy Center

*The DAEC Plant Manager*  
The duties and responsibilities of the DAEC Plant Manager, can be found in Section 13.1.2.2.1. He reports to the Vice President, Nuclear.

*The Manager, Emergency Planning is authorized direct access to the Vice President, Nuclear in support of maintaining the effectiveness of onsite and offsite emergency plan effectiveness and corporate management level 13.1-6 support.*

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Training

The Training Department is headed by the Manager, Nuclear Training, who reports to the Vice President, Nuclear and includes the instructors, the DAEC Simulator and other training facilities needed for carrying out the DAEC training programs for licensed personnel, unlicensed personnel, and general employee training discussed in Section 13.2.2.

Outage and Support

The Manager, Outage and Support reports to the Vice President, Nuclear and is responsible for managing all activities required to prepare for and conduct refueling and other planned outages. These responsibilities include but are not limited to budget and cost monitoring, planning and scheduling, resource procurement, scope control, and work execution. During the conduct of refueling outages, the Manager, Outage and Support will be responsible for management and coordination of all activities associated with the outage.

~~The Plant Procedures Group, which is responsible for maintaining the plant procedures for operations and maintenance, reports to the Manager, Outage and Support.~~

The Fire Protection Engineering Supervisor heads the Fire Protection Group and reports to the Manager, Outage and Support. The Fire Protection group is responsible for maintaining the DAEC Fire Plan and for coordination of those activities necessary to ensure compliance with the Plan, applicable Fire codes and Federal Regulations. Such activities include control of combustibles materials on site, coordination and scheduling of fire drills, ensuring routine maintenance of the fire protection equipment is properly performed, ensuring that the DAEC fire brigade is properly trained and staffed and providing fire protection engineering support. The DAEC Fire Marshall reports to the Fire Protection Engineering Supervisor.

The Security Superintendent is responsible for conducting the security program under the direction of the Manager, Outage and Support. The primary responsibility of the security organization is to regulate access to the plant and protect against radiological sabotage. In addition, they issue and collect radiation monitoring devices. They also are responsible for implementing the DAEC Fitness-for-Duty Program. See Section 13.6.

~~The Testing and Surveillance group is headed by the Testing and Surveillance Supervisor who reports to the Manager, Outage and Support. The group consists of testing and surveillance personnel and is responsible for the DAEC Surveillance Program, Modification Acceptance Testing and Special Testing (SpTP) programs.~~

*The Plant Procedures Supervisor heads the Procedure Department and reports to the Manager, Outage and Support. The Procedure Department is responsible for maintaining the plant procedures and procedure programs including the DAEC Surveillance Program, Modification Acceptance Testing, Special Testing, Emergency Assesty Procedures, and Biannual Review Programs.*



Business Unit

The Manager, Business Unit reports to the Vice President, Nuclear. The Business Unit is responsible for the Nuclear Generation Division accounting, budgeting and contract administration. The Unit is also responsible for long-term planning, monitoring of the financial viability and decommissioning of the DAEC. The Manager, Business Unit coordinates communications with the DAEC co-owners, i.e. CIPCO and Cornbelt.

The Nuclear Fuels function within the Business Unit is responsible for the design and economics of each fuel reload, the procurement of nuclear fuel, long-term fuel management for the DAEC, providing for the long term disposition of spent fuel and for providing operational support to the DAEC.

*Relocate to page 13.1-5+6*  
 13.1.1.2.2.2 Corporate Quality Assurance Department

The Manager, Corporate Quality Assurance, is assigned the primary responsibility for ensuring that quality requirements relative to the safe operation of the DAEC are identified and met. He reports to the Vice President, Nuclear. (See Figure 13.1-1).

The current description of organizational responsibilities are contained within the Corporate Quality Assurance Department Procedures.

The Manager, Corporate Quality Assurance, is responsible for preparing and maintaining the DAEC Operational Quality Assurance Program. (See Chapter 17.2).

The Manager, Corporate Quality Assurance, is responsible for evaluating the effectiveness of the DAEC Operational Quality Assurance Program and issuing periodic reports to the appropriate levels of management.

*The General Manager, Supply Chain*  
 13.1.1.2.2.3 Purchasing Department

*General Manager, Supply Chain reports to the Vice President, Administration and*  
 The ~~Director of Purchasing, Transportation and Materials Management~~ is assigned the responsibility for procurement of new, replacement, and spare components and parts, and equipment for the DAEC and the procurement of services relative to the operation of the DAEC. He is responsible for establishing procedures for the control of associated procurement activities. He is responsible for implementing the material management program at DAEC which includes inventory control, procurement activities, and issuance of part numbers for the Bill of Material (BOM) program. The department is responsible for evaluating suppliers for their commercial qualifications.

*Manager, Regulatory Performance. The Manager, Corporate Quality Assurance also has direct access to the Vice President, Nuclear as necessary regarding quality matters.*

## 13.1.1.2.2.4 Records and Microfilm Administrator

The Records and Microfilm Administrator reports to the Manager, Corporate Services and is responsible for storing, protecting, and retrieving records relating to the operation of the DAEC. The organizations responsible for initially controlling records are responsible for the formal turnover of records to the Records and Microfilm Administrator who provides microfilming and record reproduction services.

## 13.1.1.2.3 Safety Committee

The Safety Committee functions to provide independent reviews and audits of designated activities. The functions and composition of the Safety Committee are specified in the Technical Specifications and the Safety Committee Charter. See Section 13.4.2.1.

13.1.1.3 Qualifications

*Regulatory Performance*

The principal senior members of the IES Utilities, Inc. corporate staff responsible for providing technical support for operations of the DAEC include the Chairman of the Board and Chief Executive Officer; President, ~~and~~ Chief Operating ~~and Chief Financial~~ Officer; the Vice President, Nuclear, ~~the Assistant Vice President, Nuclear~~; the Manager, Engineering; the Manager, ~~Nuclear Licensing~~; the Manager, Emergency Planning; the Manager, Outage and Support; the Manager, Business Unit; the Manager, Nuclear Training and the Manager, Corporate Quality Assurance.

The Regional Administrator, Region III, U.S. Nuclear Regulatory Commission, will be kept informed of the individuals filling these positions. Information regarding their individual educational background and related experience will be made available at IES Utilities, Inc. for NRC review upon request.

## 13.1.2 OPERATING ORGANIZATION

13.1.2.1 Plant Organization

*Manager*

The Vice President, Nuclear has direct line responsibility for the operation of the DAEC. The DAEC Plant Manager is responsible for the safe, reliable, and efficient management of the plant. The following can act in the DAEC Plant Manager's behalf during his absence from the plant: Operations Supervisor; Manager, Outage and Support; Manager, Engineering; and the Maintenance ~~Supervisor~~ *Manager*. The basic organization of the DAEC consists of departments headed by the Operations Supervisor, Nuclear Analysis Supervisor, Maintenance Superintendent, *Manager* and the Radiation Protection Manager. The Operations Committee also reports to the DAEC Plant Manager. The plant organization is shown in Figure 13.1-2. This basic group is backed up



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by technical personnel as required, and it is enlarged during periods of refueling, and major equipment maintenance.

IES Utilities, Inc. has been responsible for all station operations from the start of preoperational tests. General Electric and Bechtel provided technical direction and assistance during the period of preoperational testing, core loading, startup, and pre-commercial operations.

### Operations Department

The Operations Department is headed by the Operations Supervisor and the Assistant Operations Supervisors. Each is a Senior Reactor Operator.

Most of the personnel who make up this group are qualified by academic instruction and experience at operating reactor and simulator facilities. The Operations Shift Supervisors, the Nuclear Station Operating Engineers, and the Assistant Nuclear Station Operating Engineers hold appropriate NRC licenses. These persons monitor and operate the plant nuclear, mechanical, and electrical equipment; <sup>and</sup> conduct radiation surveys as required; and direct the fuel-handling activities. *as required by ANSI/ANS 3.1-1978*  
*Manager*  
*Operations Manager, Operations Supervisor, Operations Shift Manager,*  
*are directed by Fuel Handling SOPs under the direction of the Operations Department.*

The personnel for these positions were initially assigned their duties by selection from those undergoing training. Their experience and performance during training were evaluated before they were assigned to a position. Most of the initial individuals were chosen from a group of Company personnel who successfully completed a Company-conducted nuclear power orientation course. These individuals were supplemented by personnel who had previous nuclear experience in the Naval Nuclear Power Program.

Since the DAEC has become operational, positions on the staff that become vacant are filled, where possible, by employees who progress through the different positions. They, of course, have to meet all the requirements of the appropriate NRC licenses. Individuals are initially assigned to these positions after a careful evaluation of their qualifications, their progress in the training program, and the proficiency level reached in their last position.

The duties and responsibilities of personnel from the Operations Group on an operating shift are described in Section 13.1.2.3.

*reports*  
~~resorts~~ The Reactor Engineering Group, headed by the Reactor Engineering Group Leader, ~~resorts~~ to the Operations Supervisor. The group has responsibility for monitoring the performance of the reactor core to ensure safe and economical use of the nuclear fuel and for maintaining all the necessary records for the special nuclear material on site. Reactor Engineering also assists Nuclear Fuels.

Maintenance Department

Five

The Maintenance Department is headed by the Maintenance Superintendent and is divided into three groups: the Mechanical Group, headed by the Mechanical Maintenance Supervisor; the Electrical Group, headed by the Electrical Maintenance Supervisor; and the Instrumentation and Controls Group, headed by the Instrumentation and Controls Maintenance Supervisor. The Mechanical Maintenance Group is composed of the Supervisor, nuclear mechanics, nuclear mechanic machinists, nuclear mechanic welders, and apprentices as required. Their duties consist of day-to-day repairs and adjustments, equipment condition inspections, equipment overhauls, and equipment modifications. The Electrical Maintenance Group is composed of the Supervisor, nuclear station and substation electricians, and apprentices as required. Their duties consist of the maintenance, and modification of plant electrical equipment and equipment condition inspections. The Instrumentation and Controls Group is composed of the Supervisor, nuclear station control system technicians and apprentices as required. Their duties consist of the maintenance, modification and calibration of instruments and controls.

*The Maintenance Support Group, headed by the Maintenance Process Support Supervisor, and the Fix It Now (FIN) Team, headed by the FIN Team leader.*

The maintenance staff is augmented with qualified personnel from outside sources during refueling and major maintenance periods. The maintenance staff closely coordinates its work with the Operations Department and assisted during the initial core loading and subsequent refueling operations.

Radiation Protection Department

*The FIN Team is composed of the Team Leader and technicians from various craft groups. The duties of the FIN Team include minor equipment repairs.*

The Radiation Protection Department is headed by the Radiation Protection Manager. This Department is composed of the Health Physics, Chemistry and Radioactive Waste Groups.

The Radiation Protection Department is responsible for plant radiation safety and performs contamination and radiation surveys and radiological decontamination activities necessary to ensure plant safety. The Radiation Protection Department is on call at all times.

The department is also responsible for those plant activities associated with maintaining the plant water chemistry as well as collection, packaging and transport of all radioactive waste materials.

The department is responsible for satisfying the Technical Specifications and manpower requirements for shift coverage in radwaste, chemistry, and health physics.

Health Physics Technicians are assigned shift work as required to meet plant operating needs. All members of the plant operating staff receive sufficient health physics training to be able to perform self-monitoring activities.

*The Maintenance Process Support Group is composed of the Supervisor, the Methodology Group, the Administrative Control Group and the Quality Control Group. Their function is to provide the administrative support duties for the Maintenance organization, including inspection and testing, necessary for support operation, testing, maintenance and modification of the DAEC.*

### 13.1.2.2 Plant Personnel Responsibilities and Authorities

The job description, requirements, and responsibilities of key plant personnel are included in this section. The responsibilities described are not meant to apply to only one specific position. Supervisors who meet the necessary qualifications may assume the responsibilities of positions other than their own on a temporary basis.

#### 13.1.2.2.1 DAEC Plant Manager

The DAEC Plant Manager is assigned the primary responsibility for the safe operation of the DAEC. The DAEC Plant Manager has supervisory control over those onsite activities necessary for safe operation and maintenance of the DAEC. The organizational arrangement is presented in Figure 13.1-2. The current organizational arrangement and description of organizational responsibilities are contained within the administrative procedures and the Technical Specifications. The license requirements for each position are specified in the Technical Specifications.

- The various organizations reporting to the DAEC Plant Manager are responsible for those activities associated with operations, maintenance, <sup>and</sup> repair, refueling, performance evaluation, testing, radiation protection/ALARA, the environmental survey program, ~~fire protection, security and warehousing.~~
- The Operations Committee functions to advise the DAEC Plant Manager on all matters related to nuclear safety. The composition, function, and responsibilities of the Operations Committee are specified in the Technical Specifications and are delineated in appropriate DAEC administrative procedures.

The DAEC Plant Manager reports to the Vice President, Nuclear. Specific responsibilities include, but are not limited to, the following:

1. Managing the day-to-day activities of the DAEC. These activities include power plant operations, maintenance, radiation protection, security, and technical support.
2. Coordinating interfacing activities with the NRC inspecting personnel and Corporate Quality Assurance personnel.
3. Planning and coordinating all onsite activities.

*Manager*  
13.1.2.2.2 Operations Supervisor

*The Operations Manager*  
The Operations Supervisor is responsible for the operation, safety, and security of all plant equipment and the safety and action of all personnel involved in plant operations. He is responsible for maintaining station operating records in accordance with the facility license.

*Manager*  
13.1.2.2.3 Operations Shift Supervisors

*Manager is*  
The Operations Shift Supervisors are in charge of their respective shifts and supervise personnel and equipment operation for the safe, efficient, and reliable operation of the plant. See Section 13.1.2.3.

*Manager*  
13.1.2.2.4 Maintenance Superintendent

*Manager*  
The Maintenance Superintendent is responsible for day-to-day maintenance, alteration, overhaul, and repair of electrical, mechanical, and auxiliary equipment associated with the plant. The Maintenance Engineer, Mechanical Maintenance Supervisor, Electrical Maintenance Supervisor, and Instrumentation and Controls Maintenance Supervisor report to the Maintenance Superintendent.

*Manager*  
13.1.2.2.5 Mechanical Maintenance Supervisor

*The Mechanical Maintenance Supervisor*  
The Mechanical Maintenance Supervisor is responsible for supervising the day-to-day maintenance, alteration, overhaul, and repair of mechanical equipment associated with the facility. He participates in personnel training and in the review of operating and maintenance manuals for his area of responsibility.

*Manager*  
13.1.2.2.6 Electrical Maintenance Supervisor

*The Electrical Maintenance Supervisor*  
The Electrical Maintenance Supervisor is responsible for supervising the day-to-day maintenance, alteration, overhaul, and repair of electrical equipment associated with the facility. He participates in personnel training and in the review of operating and maintenance manuals for his area of responsibility.

*Manager*  
13.1.2.2.7 Instrument & Control (I&C) Maintenance Supervisor

*The I&C Maintenance Supervisor*  
The I&C Maintenance Supervisor is responsible for supervising the day-to-day maintenance, alteration, overhaul, calibration, repair and surveillance of instrumentation and control equipment associated with the facility. He participates in personnel training and in the review of operating and maintenance manuals for his area of responsibility.

*Manager*  
13.1.2.2.8 Maintenance Process Support Supervisor

*The Maintenance Process Support Supervisor*  
The Maintenance Process Support Supervisor is responsible for supervising the day-to-day administrative duties of the Maintenance Department. This includes the quality control and methodology functions for the organization.

10  
13.1.2.2.8 Radiation Protection Manager

*(RPM)* *The RPM*  
The Radiation Protection Manager is responsible for plant radiation safety and plant chemistry. *He* supervises plant chemical and radiological activities and is in charge of the laboratory, plant chemical equipment, and radiological analysis. In addition, *he* maintains a documented record of radiation levels within plant areas as specified by the Plant Manager, and maintains a documented exposure history on all plant personnel and visitors who are subject to exposure. *He* provides technical advice to plant personnel. *He* is responsible for establishing, and has the authority to enforce, the radiation safety control policies by which the plant operates and with which all plant personnel and visitors must comply.

11  
13.1.2.2.9 Environmental Supervisor

The Environmental Supervisor is responsible for developing and maintaining programs for onsite compliance with environmental regulations. This includes compliance with RCRA hazardous waste regulations, spill regulations, regulations on liquid (non-radiological) discharges, water use regulations, and air emission regulations.

12  
13.1.2.2.10 Chemistry Supervisor

*The Chemistry Supervisor*  
The plant Chemistry Supervisor is responsible for performing the chemical and radio-chemical analyses for the power plant. *He* is responsible for maintaining the Plant Water Chemistry *and* *He* is responsible for the radiological environmental monitoring program.

13  
13.1.2.2.11 Radwaste Supervisor

The Radwaste Supervisor is responsible for the collection, treatment, packaging, storage and shipment of all radioactive waste generated at the DAEC. The Radwaste Operators report to the Radwaste Supervisor.

14  
13.1.2.2.12 Decontamination Supervisor

The Decontamination Supervisor is responsible for coordinating all radiological decontamination activities performed on site and for the lease, purchase, storage and issue of all radiological protective clothing.



Insert

13.12.2,9

The KID Team Leader is responsible for the screening of work request cards in the conduct of maintenance activities and directing the conduct of hot duration tests performed under the fix-it-now repair process.

### 13.1.2.2.13 Health Physics Supervisor

*The Health Physics Supervisor*  
The Health Physics Supervisor is responsible for performing the radiation and contamination surveys of the plant, posting of radiological conditions, issuance of Radiation Work Permits and establishing the necessary radiological controls for work performed in radioactive areas of the plant. ~~He~~ is also responsible for evaluating radiological conditions in the plant and making recommendations on work practices and design changes to ensure doses are ALARA. ~~He is responsible for the~~ issuance and analysis of personnel dosemetry, maintenance of records of personnel exposure, and the off-site environmental monitoring program. The Health Physics technicians report to the Health Physics Supervisor.

### 13.1.2.2.14 ALARA Supervisor

*Achievable*  
The ALARA Supervisor implements the site program to maintain personnel radiation exposure As Low As Reasonably ~~Achievable~~ (ALARA). The ALARA Supervisor is responsible for the measurement and documentation of personnel radiation exposure.

### 13.1.2.2.15 Quality Control and Quality Assurance Assessment Supervisors

The Quality Control Supervisor and the Quality Assurance Assessment Supervisor are responsible for verifying that the Operational Quality Assurance Program is being adequately implemented at the DAEC. Quality Control is responsible for providing the inspection and testing necessary to support operation, testing, maintenance, and modification of the DAEC. Both Supervisors report to the Manager, Corporate Quality Assurance.

### 13.1.2.3 Operating Shift Crews

*Manager*  
The normal operating shift consists of an "A" Operations Shift Supervisor (SRO) in charge, a "B" Operations Shift Supervisor (SRO), a Nuclear Station Operating Engineer (RO), an Assistant Nuclear Station Operating Engineer (RO), ~~a Second Assistant Nuclear Station Operating Engineer, a Nuclear Station Auxiliaries Engineer, and a Shift Technical Advisor.~~  
*two* *Plant Equipment Operators*

The duties and responsibilities of the personnel on an operating shift are as follows:

#### 1. "A" Operations Shift Supervisor SRO

*Manager*  
The Operations Shift Supervisor is in charge of the shift. He supervises personnel to ensure safe, efficient, and proper operation of the DAEC. He is responsible for radiation safety and chemistry, as well as tests and results on his shift. He participates in personnel training and in the review of operating manuals and instructions in the startup, operation.



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and shutdown of the facility. He participates in and contributes to the planning and scheduling of maintenance and refueling activities.

### 2. "B" Operations Shift Supervisor - SRO

The "B" Operations Shift Supervisor has the same duties and responsibilities as the "A" Shift Supervisor <sup>Manager</sup> except that of being in charge of the shift. He is included in the shift in order to permit the "A" Shift Supervisor <sup>Manager</sup> to move about the plant as needed during normal and emergency situations while at the same time fulfilling the NRC requirement that a Senior Licensed Operator be present at all times in the control room when the unit is being operated. The "B" Operations Shift Supervisor is required for all reactor modes except cold shutdown and refuel mode.

### 3. Nuclear Station Operating Engineer - RO

The Operating Engineer, on instructions from the Operations Shift Supervisor, directs generator loading and electrical switching. He monitors, controls, and directs the operation of the reactor, turbogenerator, auxiliaries, and electrical equipment. He interprets, audits, and reviews instrumentation and chart indications as to the performance, efficiency, radiation, and chemistry of the plant. He assists in the training of personnel in the skills and knowledge required for the safe and efficient operation of the facility. He performs work in reactor-fuel-handling operations involving the preparation, transfer, loading, and unloading of fuel. He may be assigned to the maintenance crew while the reactor plant is not in operation.

### 4. Assistant Nuclear Station Operating Engineer - RO

The First Assistant Operating Engineer works under the intermittent supervision of the Operations Shift Supervisor, Operating Engineer, or Relief Operating Engineer. The duties of the First Assistant Operating Engineer are essentially the same as those of the Operating Engineer; thus, the Operating Engineer and First Assistant Operating Engineer are equally qualified to operate either the reactor control board or turbine-generator control board. The First Assistant Operating Engineer may be assigned to the maintenance crew while the reactor plant is not in operation.

### 5. ~~Second Assistant Nuclear Station Operating Engineer~~ Plant Equipment Operators

<sup>Nuclear Station Plant Equipment Operators</sup>  
The ~~Second Assistant Operating Engineer~~, under the direction of licensed operators in the plant control room, inspects, services, starts, and stops turbogenerators, mechanical, electrical, related nuclear equipment, and auxiliaries primarily in the reactor building. He <sup>He NSPED</sup> observes charts, gauges, instruments, and controls, and records readings as required. <sup>and</sup>

turbine building, pump house,  
intake structure, and  
cooling towers.

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assists in the preparation of station log sheets and reports. <sup>The NSPEO</sup> He is able to conduct radiation surveys and possesses a working knowledge of water treatment equipment. <sup>The NSPEO</sup> He may be assigned to the maintenance crew while the reactor plant is not in operation.

### 6. Nuclear Station Auxiliaries Engineer

The Auxiliaries Engineer has essentially the same duties as the Second Assistant Operating Engineer, except that his duties are routinely performed in the turbine building, pump house, intake structure, and cooling towers. The Auxiliaries Engineer may be assigned to the maintenance crew while the reactor plant is not in operation.

### 7. Shift Technical Advisor

The Shift Technical Advisor (STA) provides engineering support on-shift in accordance with NUREG-0737, Item I.A.1 requirements.

The requirements and responsibilities of the STA include the following:

- a. The Shift Technical Advisor will be stationed onsite and will be present in the control room within 10 minutes of being summoned during plant power operation, in other than cold shutdown or refuel mode.
- b. The Shift Technical Advisor serves as an advisor to the Operations Shift ~~Supervisor~~ <sup>Manager</sup> during off-normal reactor plant conditions.
- c. The Shift Technical Advisor will provide operating experience assessment functions as related to DAEC design, procedures, and practice, and in support of their transient/accident assessment functions.
- d. In the performance of these duties, the Shift Technical Advisor will be free of duties associated with the commercial operation of the plant and will report directly to the Operations ~~Supervisor~~ <sup>Manager</sup>.

## 13.1.3 QUALIFICATION OF NUCLEAR PLANT PERSONNEL

### 13.1.3.1 Qualifications Requirements

The qualifications of individual members of the plant staff meet or exceed the minimum qualification requirements referenced in ANSI/ANS 3.1-1978 for comparable positions.

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The Radiation Protection Manager meets or exceeds the qualification requirements of Regulatory Guide 1.8, September 1975.

Table 13.1-1 provides the cross-reference for the various positions within the DAEC organization to those comparable position descriptions and training and experience requirements within ANSI/ANS 3.1-1978, where applicable.

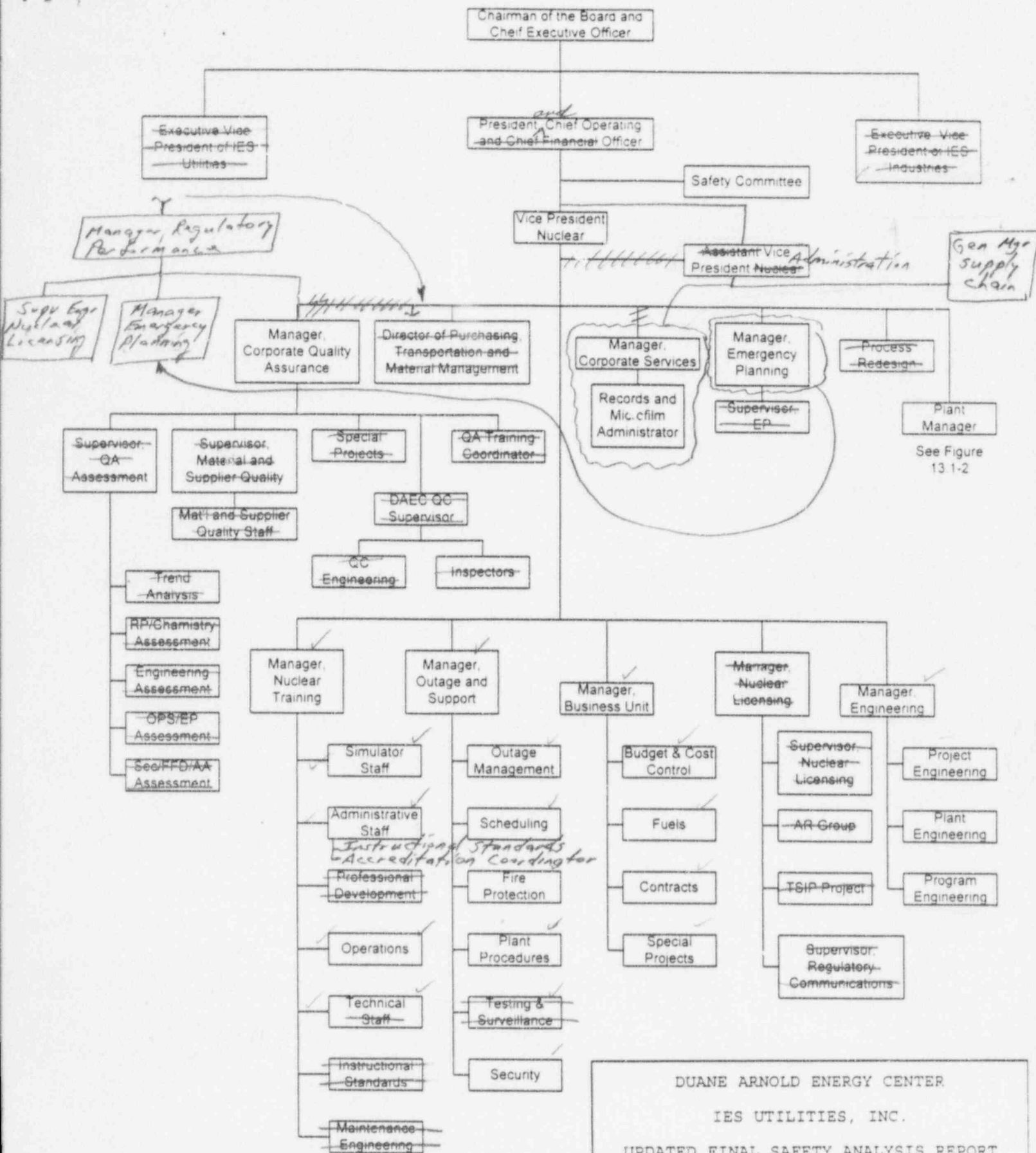
### 13.1.3.2 Qualifications of Plant Personnel

Personnel qualifications are set forth in the Technical Specifications. It is the intent of IES Utilities, Inc. to adhere to these qualifications when obtaining replacements for vacant positions, whether they be current DAEC employees advancing to positions of greater responsibility or newly hired personnel.

The personnel qualifications of key plant managerial and supervisory personnel at the time of DAEC initial fuel loading were included in the original FSAR.

Information regarding qualifications of personnel currently occupying positions in the operating organization of the DAEC ~~is~~ on file and available at the site for NRC inspection.

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DUANE ARNOLD ENERGY CENTER

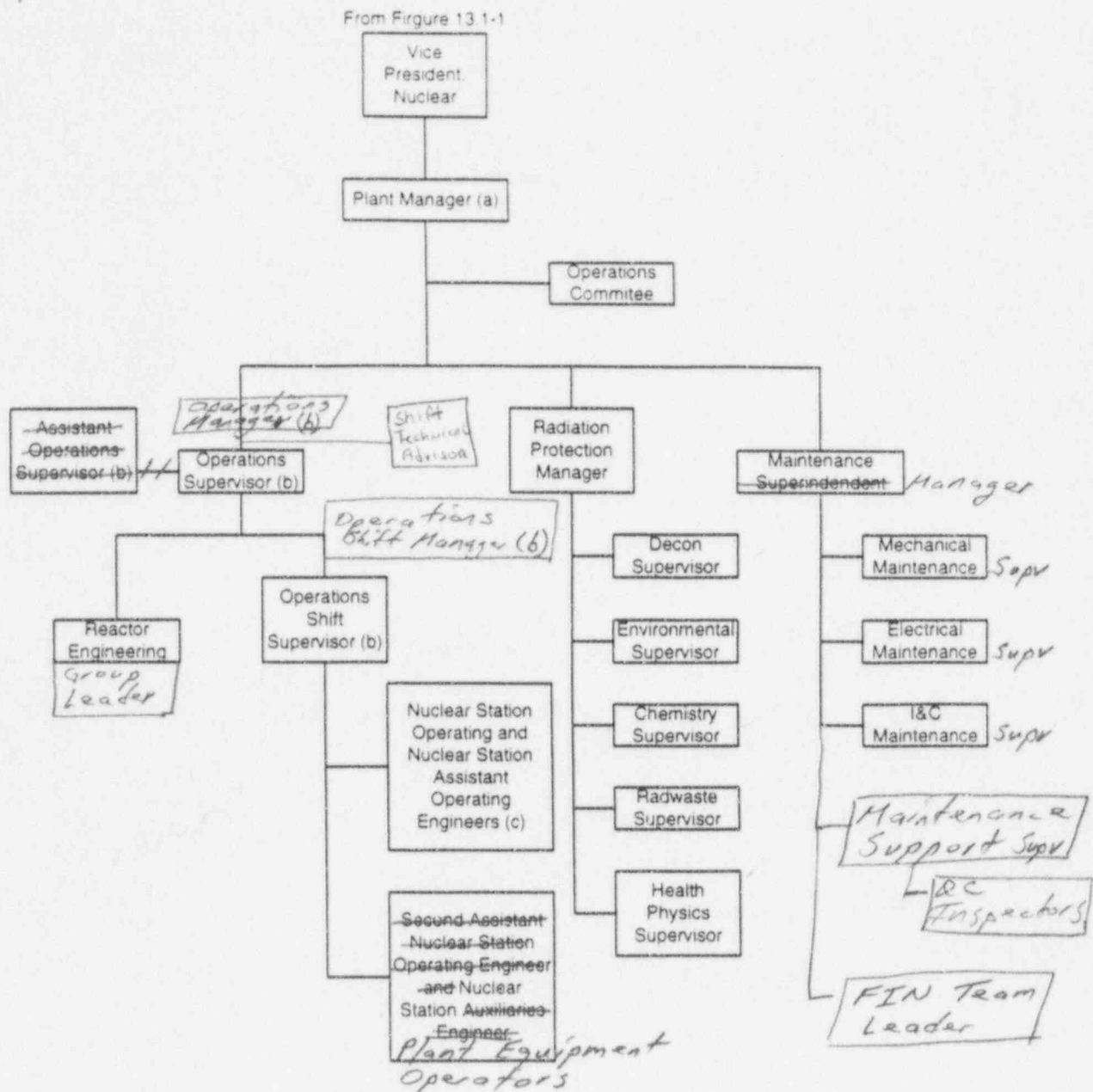
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IES Utilities, Corporate Organization

Figure 13.1-1

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a - Plant Manager or one of his designated principle alternates meet ANSI 3.1-1978 License Requirements

b - Senior Reactor Operator

c - Reactor Operator

DUANE ARNOLD ENERGY CENTER  
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Duane Arnold Energy Center Organization

Figure 13.1-2



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Table 13.1-1

DAEC Plant Staff Position	Standard of Qualification (Note 1)				Description of Duties UFSAR Section (Note 4)
	ANSI/ANS 3.1-1978 Section (Note 2)	Tech Spec Section	NUREG 0737	Reg Guide	
Plant Manager	4.2.1	6.3.4			13.1.2.2.1
Operations Supervisor <i>Manager</i>	4.2.2	6.3.5			13.1.2.1, 13.1.2.2.2
Operations Shift Supervisor <i>Manager</i>	4.3.1				13.1.2.1, 13.1.2.2.3, 13.1.2.3
Operating Engineer	4.5.1 (Note 3)				13.1.2.3
Shift Technical Advisors	4.5.1	6.3.3	Item I.A.1		13.1.2.3
Maintenance Superintendent <i>Manager</i>	4.2.3				13.1.2.1, 13.1.2.2.4
Mechanical Maintenance Supervisor	4.3.2				13.1.2.1, 13.1.2.2.5
Electrical Maintenance Supervisor	4.3.2				13.1.2.1, 13.1.2.2.6
I & C Supervisor	4.4.2				13.1.2.1, 13.1.2.2.7
Reactor Engineers	4.4.1				13.1.2.1
Fire Protection Engineering Supervisor	4.3.2				13.1.1.2.2.1
Radiation Protection Manager	4.4.4	6.3.2		1.8-1975	13.1.2.1, 13.1.2.2.8
Chemistry Supervisor	4.4.3				13.1.2.2.10
Radwaste Supervisor	4.3.2				13.1.2.2.11
Health Physics Supervisor	4.3.2				13.1.2.2.13
Decon Supervisor	4.3.2				13.1.2.2.12
ALARA Supervisor	4.3.2				13.1.2.2.14
Manager, Outage and Support	4.3.2				13.1.1.2.2.1
Supervisor, Procedures Department	4.3.2				
Testing and Surveillance Supervisor	4.2.4				13.1.1.2.2.1
Security Superintendent	4.3.2				
Manager, Corporate Quality Assurance	4.2.4				13.1.1.2.2.2
QA Procurement Supervisor	4.4.5				
QA Assessment Supervisor	4.4.5				13.1.2.2.15
QC Supervisor	4.4.5				13.1.2.2.15
Manager, Nuclear Licensing <i>Reg Prof</i>	4.2.4				13.1.1.2.2.1
Supervisor, Nuclear Licensing	4.3.2				
Supervisor, Regulatory Communications	4.3.2				
Manager, Engineering	4.2.4				13.1.1.2.2.1
Project Engineering Supervisor	4.3.2				
Plant Engineering Supervisor	4.3.2				
Program Engineering Supervisor	4.3.2				
Materials Management Supervisor	4.3.2				
Manager, Nuclear Training	4.2.4				13.1.1.2.2.1
Training Supervisor-Simulator	4.3.2				
Training Supervisor-Technical Programs	4.3.2				
Training Supervisor-Operations	4.3.2				
Training Supervisor-Administrative	4.3.2				
Training Supervisor-Instructional Std	4.3.2				
Training Supervisor-Maintenance	4.3.2				

Note: 1 - In some cases, plant design features or unusual operating conditions may indicate that additional or more specialized expertise beyond qualifications presented in this Standard is needed. This determination will be made on a case-by-case basis.

Note: 2 - See DAEC Technical Specifications Section 6.3.1 for commitment to ANSI/ANS 3.1-1978.

Note: 3 - Applicants for senior operator licenses shall have 4 years of responsible power plant experience. Responsible power plant experiences should be that obtained as a control room operator (fossil or nuclear) or as a power plant staff engineer involved in the day-to-day activities of the facility, commencing with the final year of construction. A maximum of 2 years power plant experience may be fulfilled by academic or related technical training, on a one-for-one time basis. Two years shall be nuclear power plant experience. At least 6 months of the nuclear power plant experience shall be at the plant for which he seeks a license.  
Applicants for senior operator licenses shall have held an operators license for 1 year

Note: 4 - If no UFSAR Section is listed, staff position is not discussed in Chapter 13.1.

*FIN Team Leader 4.3.2*

*Maint Process Support Supv 4.3.2*