

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION



IN THE MATTER OF )  
 ILLINOIS POWER COMPANY, )  
 SOYLAND POWER COOPERATIVE, INC. )  
 and WESTERN ILLINOIS POWER ) Docket Nos. 50-461-OL  
 COOPERATIVE, INC. ) 50-462-OL  
 )  
 (Operating Licenses for Clinton )  
 Power Station, Units 1 and 2) )

RESPONSE OF ILLINOIS POWER TO  
 THE STATE OF ILLINOIS' FIRST REQUEST  
 FOR PRODUCTION OF DOCUMENTS

Illinois Power Company ("Illinois Power" or "the Company") will make available for inspection at its offices all documents in its possession, custody, or control, within the scope of the State of Illinois' First Request for Production of Documents, except as follows:

- [3. All documents referring to, related to, or discussing the analysis or assessment of anticipated transient without scram (ATWS) conditions.]
- [4. All documents pertaining to the measures IP intends to take to reduce the risk of an ATWS condition at the CPS.]
- [5. All documents pertaining to the measures IP plans to take to mitigate the consequences of an ATWS condition.]

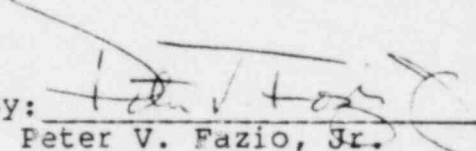
Illinois Power objects to Document Request Nos. 3, 4, and 5 for the reasons set forth in its objection to Interrogatory

No. 30 of the State of Illinois' First Set of Interrogatories  
to Illinois Power Company.

[6. All employment records for all  
persons employed in Quality Assurance  
or Quality Control functions at  
the CPS within the last five years.]

Illinois Power objects to Document Request No. 6 on the  
grounds that the documents requested are (1) not relevant,  
and (2) are exempted from disclosure under 10 C.F.R. § 2.796,  
and disclosure is not necessary to a proper decision in  
the proceeding.

ILLINOIS POWER COMPANY

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Dated: July 27, 1981.



EXHIBITS

Exhibit A  
Interrogatory Nos. 1(a) AND 1(b)

EXHIBIT A  
ANSWER TO INTERROGATORY NOS. 1(a) and 1(b)

Nuclear Station Engineering Department

<u>Position</u>	<u>Number of Positions</u>	<u>Number Hired</u>
Manager	1	1
Secretary	1	1
Director-Design and Station Engineering	1	1
Director-Nuclear Safety & Engrg. Analysis	1	1
Supervisor-Field Engineering	1	1
Supervisor-Mechanical Engineering	1	1
Supervisor-Electrical Engineering	1	1
Supervisor-Control & Instrumentation Engrg.	1	1
Supervisor-Civil/Structural Engineering	1	1
Supervisor-Technical Assessment	1	1
Supervisor-Fuel Cycle	1	1
Supervisor-Safety Analysis	1	1
Supervisor-Compliance	1	1
Supervisor-Licensing	1	1
Administrative Supervisor	1	1
Supervising Engineer	6	--
Project Engineer	6	6
Staff Engineer/Engineer	24	21
Licensing Coordinator	1	1
Engineering Clerk	5	1
Accounting Clerk	2	2

<u>Position</u>	<u>Number of Positions</u>	<u>Number Hired</u>
Stenographer/Typist	2	2
Junior Clerk	2	2
Engineering Analyst	2	1
Construction Engineer	2	1
	<hr/> 67	<hr/> 52

Exhibit B  
Interrogatory Nos. 1(a) and 1(b)

EXHIBIT B  
ANSWER TO INTERROGATORY NOS. 1(a) AND 1(b)

CPS Operations

<u>Position</u>	<u>Number of Positions</u>	<u>Number Hired</u>
Power Plant Manager	1	1
Assistant Power Plant Manager	2	2
Secretary	1	1
Assistant Supervisor - Plant Operations	1	0
Control Room Supervisor	5	4
Assistant Shift Supervisor	9	5
Supervisor - Plant Operations	1	1
Shift Supervisor	6	4
Control Room Operator	15	23
Unit Attendent	5	0
Auxiliary Operator	5	0
Assistant Supervisor - Electrical	1	2
Maintenance Inspector	1	1
Supervisor - Electrical	1	1
Electrician	7	6
Electrical Maintenance Foreman	1	1
Assistant Supervisor - Mechanical	3	2
Mechanical Engineer	1	3
Mechanical Specialist		
Maintenance Inspector	1	0
Maintenance Planner	2	1
Supervisor Mechanical	1	1
Mechanical Maintenance Foreman	3	0
General Repairman - Certified Welder	5	1
General Repairman/Machinist	25	14
Technical Analyst	1	1
Nuclear Engineer	3	2
Results Engineer	4	6
Technical Specialist	3	1
Supervisor - Results	1	
Supervisor - Technical	1	1
Supervisor - Nuclear	1	1
Shift Technical Advisor	6	
Stores Supervisor	1	1
Storehouseman	5	4
Technical Analyst	1	-
Radiation and Chemical Engineer/Specialist	1	1

Exhibit C  
Interrogatory Nos. 1(a) and 1(b)



EXHIBIT C  
ANSWER TO INTERROGATORY NOS. 1(a) AND 1(b)

Quality Assurance

<u>Position</u>	<u>Number of Positions</u>	<u>Number Hired</u>
Supervisor-Plant Operations Q.A.	1	1
Supervisor-Construction Q.A.	1	1
Station Q.A. Engineer Specialist	4	2
Q.A. Engineer Specialist	7	7
Engineer	1	1
Director-Q.A.	1	1
Supervisor-Engineering Q.A.	1	1
Audit Coordinator	1	1
Special Processes Engineer	1	1

Exhibit D  
Interrogatory 1(c) and 1(f)

ILLINOIS POWER COMPANY  
**POSITION DESCRIPTION**  
SUPERVISORY, ADMINISTRATIVE AND PROFESSIONAL POSITIONS

POSITION TITLE: ENGINEERING ANALYST

DEPARTMENT: Nuclear Station  
Engineering

POSITION CODE: 020

LOCATION: Headquarters

REPORTING TO: Administrative Supervisor

DATE: July 17, 1981

**RESPONSIBILITIES:**

Control of administrative tools utilized for the purpose of tracking engineering objectives and commitments through to completion. Control of engineering computational systems and the procedures used to perform this work. Familiarity with computers and computer terminals, as well as general administrative procedures, is required to effect these controls.

**DUTIES:**

1. Maintain nuclear engineering section computational and experimental data files.
2. Maintain the administrative control system for engineering objectives and commitments.
3. Establish and maintain engineering scheduling information.
4. Maintain engineering data reference information sources such as BWR Experience Reports, ASME Boiler and Pressure Vessel Code, and others.
5. Other special duties as assigned by the Administrative Supervisor.

Illinois Power Company  
POSITION DESCRIPTION SUPPLEMENT  
SUPERVISORY, ADMINISTRATIVE, AND PROFESSIONAL POSITIONS

Position Title: ENGINEERING ANALYST

Position Code: 020

Department: Nuclear Station Engineering

Date: July 17, 1981

FACTOR	SUBSTANTIATING INFORMATION
I. KNOWLEDGE AND EXPERIENCE	Minimum education - at least a high school education. Experience - at least three years working experience in an engineering oriented environment and preferably associated with construction.
II. ORIGINAL THINKING	This position involves some duties which require an amount of resourcefulness in order to develop improved methods of maintaining data.
III. POLICIES, PLANS, AND PROGRAMS	Recommends changes and assists in the development of more effective ways to accomplish work assignments and techniques.
IV. ADMINISTRATIVE DIRECTION AND COORDINATION OF PEOPLE	This position requires regular contacts with other Departmental personnel and some comprehension and understanding of technical functions.
V. RESPONSIBILITY FOR DECISION MAKING	Recommends changes in methods or systems to more effectively produce management goals in the administrative section of the Department.
VI. RESPONSIBILITY FOR EXTERNAL RELATIONS	This position has contact with other departments within IP but only limited contact outside of the Company.

ILLINOIS POWER COMPANY  
**POSITION DESCRIPTION**  
SUPERVISORY, ADMINISTRATIVE AND PROFESSIONAL POSITIONS

POSITION TITLE: Licensing Assistant

DEPARTMENT: Nuclear Station  
Engineering

POSITION CODE: 110

LOCATION: Headquarters

REPORTING TO: Supervisor-Licensing

DATE: July 17, 1981

**RESPONSIBILITIES:**

Technical assistance for licensing activities related to the design, construction, and/or modification of nuclear power plants.

**DUTIES:**

Assist the Supervisor-Licensing in:

1. Preparation and review of licensing documents for nuclear projects.
2. Implementation of nuclear regulatory guidance programs.
3. Review of new and revised rules and regulations of the Nuclear Regulatory Commission and preparation of summaries of their contents for Department information.
4. Preparation of new or revised Departmental licensing procedures and instructions.
5. Administrative guidance for maintaining a current, updated file of all applicable regulations, criteria, guides, codes and standards, and other pertinent licensing documents.
6. Updating Standard Review Plans and other reference licensing documents as required.
7. Maintenance and upkeep of licensing files and records.
8. Identification and resolution of licensing problems.
9. Other duties as assigned by the Supervisor-Licensing.

Illinois Power Company  
POSITION DESCRIPTION SUPPLEMENT  
SUPERVISORY, ADMINISTRATIVE, AND PROFESSIONAL POSITIONS

Position Title: Licensing Assistant

Position Code: 110

Department: Nuclear Station Engineering

Date: July 17, 1981

FACTOR	SUBSTANTIATING INFORMATION
I. KNOWLEDGE AND EXPERIENCE	<p>Minimum Education-At least a high school education. Supplemental education in science fields and/or business college training is highly desirable.</p> <p>Experience-At least three years' working experience in the nuclear energy field, preferably associated with a utility building a nuclear power plant.</p>
II. ORIGINAL THINKING	<p>This position involves handling of many duties which require some creativeness and resourcefulness to accomplish assigned licensing activities under supervision and technical guidance.</p> <ol style="list-style-type: none"><li>1. Develop systematic ways for effective reviews of licensing documents and regulatory requirements.</li><li>2. Initiate improvements for implementation of nuclear regulatory guidance programs.</li></ol>
III. POLICIES, PLANS, AND PROGRAMS	<p>Assists in development of new or revised licensing procedures and instructions which requires an ability to comprehend and assess nuclear licensing process system and to help analyze difficult licensing problems.</p>
IV. ADMINISTRATIVE DIRECTION AND COORDINATION OF PEOPLE	<p>This position requires regular contacts with engineering personnel and some comprehension and understanding of technical, engineering, and environmental matters in providing technical assistance for nuclear licensing activities, including engineering verifications that commitments have been fulfilled.</p>
V. RESPONSIBILITY FOR DECISION MAKING	<p>Recommends changes in methods to improve conduct of licensing activities. Exercises judgment in compilation and presentation of engineering review comments on licensing documents.</p>
VI. RESPONSIBILITY FOR EXTERNAL RELATIONS	<p>Interfaces with licensing engineering personnel in contractor organizations and other utilities relative to maintenance of licensing documents and nuclear regulatory guides, standards, and codes. Interfaces with Department engineering personnel and with other departments of the Company in providing assistance for the implementation and coordination of engineering commitments verification.</p>

ILLINOIS POWER COMPANY  
**POSITION DESCRIPTION**  
SUPERVISORY, ADMINISTRATIVE AND PROFESSIONAL POSITIONS

POSITION TITLE: Director-Nuclear Safety  
and Engineering Analysis

DEPARTMENT: Nuclear Station  
Engineering

POSITION CODE: 226

LOCATION: Headquarters

REPORTING TO: Manager-Nuclear Station  
Engineering Department

DATE: September 18, 1980

**RESPONSIBILITIES:**

Direct the performance of nuclear safety and engineering analyses to support startup, operation, plant modifications, licensing, and other Clinton Power Station activities assigned to the Nuclear Station Engineering Department (NSED).

**DUTIES:**

1. Direct NSED work to effectively provide nuclear safety and engineering analyses to support the Clinton Power Station.
2. Direct or coordinate the nuclear safety and engineering analysis activities of consultants, A/E's, and suppliers providing services, materials, equipment, and related design.
3. Direct general independent analyses of Station activities and conditions, including management methods, procedures, practices, emergency plans, reliability analyses, training programs, and personnel qualifications.
4. Direct the nuclear safety and engineering analyses of Station equipment and systems operation, including the performance of criticality checks, shielding studies, radiation monitoring and exposures, and nuclear instrumentation and controls for the reactor systems and other sources of nuclear radiation.
5. Maintain cognizance of analytical methods, computer programs, and other analytical tools which become available and implement their application to CPS as appropriate. Maintain knowledge of market conditions such as uranium availability and cost, enrichment capacity, and probable future changes which could impact CPS operations.
6. Direct the general fuel cycle management activities, including cycle performance analyses, reload planning, replacement fuel specifications, fuel and core component procurement, fuel shuffling, and reactor power operating strategies.
7. Maintain nuclear engineering and analytical proficiency of the Department by formulating and directing training programs, industry surveys, coordination with other utilities, and maintaining effective cognizance of applicable regulations, codes, and standards.



Director-Nuclear Safety and Engineering Analysis (continued)

8. Direct the nuclear safety and engineering activities of the Department which interface with the NRC, State, and local agencies to the extent necessary to provide effective cognizance and control of overall Company nuclear safety commitments.
9. Direct the Department's participation in standing committees (such as NRAG and ALARA) and consulting assistance to Company management regarding nuclear safety-related affairs of the Company
10. Other duties as assigned by the Manager of Nuclear Station Engineering Department.

Position Title: Director-Nuclear Safety and Engineering Analysis Position Code: 226  
Department: Nuclear Station Engineering Date: 9/17/80

FACTOR	SUBSTANTIATING INFORMATION
I. KNOWLEDGE AND EXPERIENCE	BS degree in nuclear, mechanical, or electrical engineering required with formal training or suitable experience in one or more alternate engineering fields highly desirable. Several years' experience in nuclear station design and/or operation required. Several years' experience in engineering and technical supervision with cognizance of QA and regulatory requirements.
II. ORIGINAL THINKING	Position requires <u>timely</u> decisions on a variety of design/construction problems, many of which may be unfamiliar, covering major engineering disciplines. Innovative thinking tempered by practical judgment and common sense is necessary to ameliorate the impact of these decisions on design, construction, schedule, and costs. The incumbent must be able to analyze interface and procedural problems and determine and "sell" an approach to resolve them.
III. POLICIES, PLANS, AND PROGRAMS	Development of Section policies, plans, programs, procedures, and instructions are primary responsibilities. Close coordination with technical consultants and IP's Operations Department is required to effectively carry out this responsibility due to extremely active interfaces with these organizations. Also, position has a responsibility to supporting the Manager in the development of Departmental policy.
IV. ADMINISTRATIVE DIRECTION AND COORDINATION OF PEOPLE	Direction of 3-4 supervisors who are responsible for nuclear system and equipment analyses, fuel cycle planning and management and analyses of overall plant activities, including management, procedures, instructions, and personnel. Responsible for evaluating IP personnel per Company procedures and evaluating contractor personnel capabilities.
V. RESPONSIBILITY FOR DECISION MAKING	This position is responsible for most of the nuclear engineering activities and capabilities within the Company. Errors in judgment could have serious cost, schedule, regulatory, and plant operating impacts. On a project of this magnitude, such mistakes in judgment could amount to millions of dollars in direct and/or indirect costs. Additionally, many technical, interface, supervisory, and administrative decisions are required of this position.
VI. RESPONSIBILITY FOR EXTERNAL RELATIONS	Very significant interfaces are maintained with Government agencies (USNRC, State Radiological Health), project equipment and services suppliers, project partners (Co-ops), other utilities, and other Company departments. Interaction with Quality Assurance.

ILLINOIS POWER COMPANY  
**POSITION DESCRIPTION**  
SUPERVISORY, ADMINISTRATIVE AND PROFESSIONAL POSITIONS

POSITION TITLE: Director-Design Engineering

DEPARTMENT: Nuclear Station  
Engineering

POSITION CODE: 245

LOCATION: Headquarters

REPORTING TO: Manager of Nuclear  
Station Engineering

DATE: July 17, 1981

**RESPONSIBILITIES:**

Engineering and design work performed by Company, A/E, NSSS contractor, and other on-site as well as selected off-site personnel necessary to support construction and startup of Clinton Power Station (CPS) in an efficient and timely manner.

**DUTIES:**

1. Direct Nuclear Station Engineering Department work to effectively provide engineering and design support for on-site construction work.
2. Direct Nuclear Station Engineering Department control of CPS design and engineering by A/E, NSSS supplier, and other engineering consultants performing design work during the construction and startup of CPS.
3. Direct Nuclear Station Engineering Department coordination of design work of suppliers of equipment and material for CPS. Such material and equipment may be procured during the design, construction, and startup phases of the plant and may be specified or procured through the efforts of various suppliers selected through the efforts of the A/E and the Company.
4. Direct the site design configuration control program which includes the administration of Field Change Notices (FCR's), Nonconformance Reports (NCR's), and Engineering Change Notice (ECN) implementation, and coordinate similar or related control methods and systems of NSSS supplier on-site activities, as well as other sources of materials, equipment, and systems during construction.
5. Direct the control of site activities and Department support for startup procedure reviews, testing assistance, interpretation of test results, redesign, acceptance, and final engineering documentation of materials, equipment, and systems, including preparation and review of acceptable records, as-built drawings, reports, etc.

Director-Design Engineering (continued)

6. Administer and control the selection, acquisition, authorization, assignment, and coordination of A/E or design consultant personnel temporarily working at the site to supplement or assist Department or Company engineering activities.
7. Provide assistance to site Document Control/Records personnel in performance of their duties to receive, maintain, issue, control distribution, and otherwise administer programs related to records and document management on site.
8. Coordinate with the CPS Project Manager and the Manager of Nuclear Station Engineering to evaluate management systems, procedures, and methods and to effect improved methods resulting in lower plant engineering and construction costs and improved operating plant availability, reliability, and efficiency.
9. Obtain timely approval of the Manager of Nuclear Station Engineering for planning and optimum utilization of Department resources to assure effective support of the Department's role in engineering, design, licensing, quality assurance, and regulatory compliance commitments made by the Company as a basis for the construction permit and startup activities to be authorized by the operating license.

Illinois Power Company  
POSITION DESCRIPTION SUPPLEMENT  
SUPERVISORY, ADMINISTRATIVE, AND PROFESSIONAL POSITIONS

Position Title: Director-Design Engineering

Position Code: 245

Department: Nuclear Station Engineering

Date: July 17, 1981

FACTOR	SUBSTANTIATING INFORMATION
I. KNOWLEDGE AND EXPERIENCE	Minimum of BS degree in civil/structural, electrical, or mechanical engineering required, with formal training (or suitable experience) in all three disciplines desirable. Several years' experience in power plant design and/or construction necessary, and some experience in power plant operations would be desirable. Should have engineering supervision experience and be cognizant of quality assurance, regulatory, and nuclear records requirements.
II. ORIGINAL THINKING	Position requires <u>time</u> decisions on a variety of design/construction problems, many of which may be unfamiliar, covering major engineering disciplines. Innovative thinking tempered by practical judgment and common sense is necessary to ameliorate the impact of these decisions on design, construction, schedule, and costs. The incumbent must be able to analyze interface and procedural problems and determine and "sell" an approach to resolve them.
III. POLICIES, PLANS, AND PROGRAMS	Development of Section policies, plans, programs, procedures, and instructions are primary responsibilities. Close coordination with Architect/Engineer, Constructor, and IP's Operations Department is required to effectively carry out this responsibility due to extremely active interfaces with these organizations. Also, position has a responsibility to supporting the Project Manager in the development of Departmental policy.
IV. ADMINISTRATIVE DIRECTION AND COORDINATION OF PEOPLE	Supervision of IP technical personnel assigned to support site engineering work. Field assignments are expected to include from time to time a major faction of the technical manpower of NSED as well as supplemental assignments from the A/E and other consultants. Supervision also includes IP clerical personnel assigned on site to assist in the administrative support for the engineering activities. Responsible for evaluating IP personnel per Company procedures and evaluating A/E personnel.
V. RESPONSIBILITY FOR DECISION MAKING	Daily decisions made by position are relative to field initiated design change requests (FCRs), and construction deviations from the design (NCRs). Errors in judgment could have serious cost, schedule, regulatory, and plant operating impacts. On a project of this magnitude, such mistakes in judgment could amount to millions of dollars in direct and/or indirect costs. Additionally, many technical, interface, supervisory, and administrative decisions are required of this position.
VI. RESPONSIBILITY FOR EXTERNAL RELATIONS	Daily interface/direction with/to the Architect/Engineer (both local--see Item IV--and home office), and the Constructor. Less frequent but very sensitive interfaces include Government agencies (USNRC, State Radiological Health), project equipment and services suppliers, project partners (Co-ops), other utilities, and other Company Departments. Interaction with Quality Assurance.

ILLINOIS POWER COMPANY  
**POSITION DESCRIPTION**  
SUPERVISORY, ADMINISTRATIVE AND PROFESSIONAL POSITIONS

POSITION TITLE: Construction Engineer

DEPARTMENT: Nuclear Station  
Engineering

POSITION CODE: 283

LOCATION: Clinton Site

REPORTING TO: Supervisor-Construction  
Engineering

DATE: July 17, 1981

**RESPONSIBILITIES:**

Assist the Supervisor-Construction Engineering in providing engineering support for the construction and operations/startup activities and directing the activities of Section personnel at Clinton Power Station.

**DUTIES:**

1. Lead and coordinate the activities of and provide technical assistance to Section engineers and clerical personnel in the performance of their duties.
2. In the absence of, and as designated by, the Supervisor-Construction Engineering, assume the total responsibility for the supervision and coordination functions necessary to control the interfaces between the Construction Engineering Section and other external organizations and Company departments.
3. Plan work assignments and schedules to meet commitment requirements of the Section.
4. Review, make recommendations, approve (as directed), and expedite Field Change Requests (FCRs), Nonconformance Reports (NCRs), and Field Problems Reports (FPRs).
5. Provide assistance to outside organizations in the interpretation of design document requirements, equipment/system performance acceptability, code, and other regulatory-type requirements.
6. Provide assistance to document/records personnel in the resolution of documentation problems.
7. Make recommendations to the Supervisor-Construction Engineering that result in lower plant engineering and construction costs and/or plant operating efficiencies.
8. Perform other tasks as assigned by the Supervisor-Construction Engineering.



Illinois Power Company  
POSITION DESCRIPTION SUPPLEMENT  
SUPERVISORY, ADMINISTRATIVE, AND PROFESSIONAL POSITIONS

Position Title: Construction Engineer

Position Code: 283

Department: Nuclear Station Engineering

Date: July 17, 1981

FACTOR	SUBSTANTIATING INFORMATION
I. KNOWLEDGE AND EXPERIENCE	Minimum of BS degree in one of the major branches of engineering (or equivalent experience), with some knowledge and/or experience desirable in the other disciplines. Experience in power plant design, construction, and/or startup is necessary. Knowledge of special processes (welding, NDE, etc.), codes, standards, regulations, and operations is desirable.
II. ORIGINAL THINKING	Incumbent must be able to handle a variety of problems, both outside his area of expertise as well as within, and recommend or make timely decisions to resolve them. Creative thinking and a practical approach are required to come to solutions that minimize the impact on construction and schedule.
III. POLICIES, PLANS, AND PROGRAMS	Provide assistance in the development of Section plans, programs, procedures, and instructions, and review and make suggestions on Section policies.
IV. ADMINISTRATIVE DIRECTION AND COORDINATION OF PEOPLE	Supervise activities of Section engineers and clerical personnel. Incumbent provides supervisory and technical guidance to Section personnel (both IP and architect/engineer) and technical assistance to the constructor, vendors, and other IP personnel. Coordinating and expediting architect/engineer design releases, modifications, and evaluations are a responsibility of this position.
V. RESPONSIBILITY FOR DECISION MAKING	The position deals with technical matters relative to engineering design, construction, startup, and operation of a power generating facility. Incorrect analysis and judgment resulting in wrong recommendations or decisions could lead to project completion delays, reduction of plant operating efficiency, and additional plant shutdowns, all of which translate into loss of generation revenues.
VI. RESPONSIBILITY FOR EXTERNAL RELATIONS	Daily interface with the architect/engineer, the constructor, and the Company's construction organization (Project Management) is required to resolve technical matters. Less frequent interfaces include trips to vendors' shops, meetings in the architect/engineer's home offices, and telecons and/or meetings with other utilities.



ILLINOIS POWER COMPANY  
**POSITION DESCRIPTION**  
SUPERVISORY, ADMINISTRATIVE AND PROFESSIONAL POSITIONS

POSITION TITLE: Staff Engineer

DEPARTMENT: Nuclear Station  
Engineering Department

POSITION CODE: 327

LOCATION: Decatur Headquarters

REPORTING TO: Supervisor

DATE: 4/29/81

RESPONSIBILITIES: Perform Engineering Design and Analysis to support the construction and operation of the Clinton Power Station.

- DUTIES:
1. Conduct engineering and design for assigned power plant projects. This includes providing cost and schedule estimates for these projects. Evaluate the designs of Power plant systems performed by consultants and contractors.
  2. Conduct Engineering analysis to establish the design adequacy of systems, components, and structures at the Clinton Power Station.
  3. Develop criteria and specifications for procurement and installation of materials and components. This may be for nuclear fuel, system design criteria, or procured parts. Implement receipt inspection of these items as necessary.
  4. Maintain knowledge and proficiency in the use of analytical techniques, computer codes, and research developments in the nuclear power industry. Implement application of these resources as necessary.
  5. Conduct review of test results, equipment performance data, and system operation. Participate in preparation and performance of inspection test programs for power plant systems and components.
  6. Establish interface with other departments within IP including Purchasing, Power Production, Industrial Relations, Operations, Quality Assurance, and Construction.
  7. Document the activities of the Nuclear Station Engineering Department and ensure that such documentation is accurate and retrievable to support the continued safe operation of the Clinton Power Station.
  8. Provide technical assistance to Engineers in the performance of their work. Direct the activities of assigned draftsmen and engineering Clerks.

Staff Engineer (continued)

9. Perform other duties as identified in the Engineer Position Description or as assigned by the respective Supervisor.

Illinois Power Company  
POSITION DESCRIPTION SUPPLEMENT  
SUPERVISORY, ADMINISTRATIVE, AND PROFESSIONAL POSITIONS

Position Title: Staff Engineer

Position Code: 327

Department: Nuclear Station Engineering Department

Date: 4/28/81

FACTOR	SUBSTANTIATING INFORMATION
I. KNOWLEDGE AND EXPERIENCE	<p>Minimum Education - BS in one of the major branches of engineering or related science.</p> <p>Experience - Three to four years of design and design review. Systems and plant testing experience is desirable.</p> <p>Experience should have provided:</p> <ol style="list-style-type: none"> <li>1) An understanding of plant systems and their interfaces with respect to design, construction, operation and maintenance.</li> <li>2) An ability to design and to evaluate the economics and reliability of plant systems.</li> <li>3) An ability to perform well with personnel from other departments and companies.</li> </ol>
II. ORIGINAL THINKING	<p>The individual in this position is expected to be able to assess a design or analysis situation and be able to suggest appropriate action. The individual is expected to follow through on approved action with a minimum of guidance and direction. Required to regularly propose Department and Company interpretations of Federal regulations, codes, standards, and other documents applicable to CPS design, procurement, manufacturing, construction, testing, and operation.</p>
III. POLICIES, PLANS, AND PROGRAMS	<p>The incumbent will be required to establish plans and programs related to the implementation of assigned activities. Programs involving radiation exposure or reliability of equipment will be implemented by the incumbent.</p>
IV. ADMINISTRATIVE DIRECTION AND COORDINATION OF PEOPLE	<ol style="list-style-type: none"> <li>A. Directs the work of assigned clerical personnel, draftsmen and technically trained personnel.</li> <li>B. Provides technical guidance to less experienced engineers.</li> <li>C. Provides input into performance evaluation of clerical personnel.</li> </ol>
V. RESPONSIBILITY FOR DECISION MAKING	<p>Decisions made in this position involve evaluations and determinations that range from technical details to design plans and practices. Sound judgement is required to accurately determine the economical, reliability and operational impacts of alternatives. Decision errors directly affect the cost of installation, operation and maintenance and thus ultimately the reliability and energy cost of company generating facilities.</p>
VI. RESPONSIBILITY FOR EXTERNAL RELATIONS	<p>Contacts can involve counterparts within architect-engineer, vendor, IP and other utility organizations and companies with which IP might develop common interests. These could involve such as new designs, modifications, and research and development projects and would be conducted in accordance with IP's policies and with the cognizance of the Section Supervisor.</p>

ILLINOIS POWER COMPANY  
**POSITION DESCRIPTION**  
SUPERVISORY, ADMINISTRATIVE AND PROFESSIONAL POSITIONS

POSITION TITLE: Engineer

DEPARTMENT: Nuclear Station  
Engineering

POSITION CODE: 324

LOCATION: Decatur Headquarters

REPORTING TO: Supervisor

DATE: 4/28/81

**RESPONSIBILITIES:**

Provide technical support to the design and safe operation of the Clinton Power Station.

**DUTIES:**

1. Review and monitor the design of power plant systems performed by consultants and contractors.
2. Provide technical support to implement field changes, work out nonconformances, and provide construction assistance as needed.
3. Review and evaluate test data received from various test programs including preoperational testing, ISI testing, NPRD reliability data, and other special tests. These reviews shall verify design adequacy and determine operational trends or characteristics.
4. Assist in performing the following design engineering activities:
  - a. Analyzing alternate designs and design practices for practicality and reliability.
  - b. Preparation of specifications for services and equipment.
  - c. Preparation of cost estimates and schedules.
  - d. Preparation of designs and drawings.
5. Provide direct engineering support during plant outages to assist or coordinate various investigations, tests, and modifications.
6. Prepare and maintain documentation of Department and consultants' engineering activities. These records are to establish the validity of operating and design procedures or support changes to such procedures. They must comply with applicable regulatory and Company or Department requirements.
7. Perform other duties as assigned by the respective supervisor.

Illinois Power Company  
POSITION DESCRIPTION SUPPLEMENT  
SUPERVISORY, ADMINISTRATIVE, AND PROFESSIONAL POSITIONS

Position Title: Engineer

Position Code: 324

Department: Nuclear Station Engineering

Date: 4/28/81

FACTOR	SUBSTANTIATING INFORMATION
I. KNOWLEDGE AND EXPERIENCE	<p>Minimum Education - BS in one of the major branches of engineering or related sciences.</p> <p>Experience - none required.</p>
II. ORIGINAL THINKING	Needs to be able to develop original and logical solutions to multiple design, testing, and operating needs for one or more projects, under broad supervision. Required to regularly implement Department and Company interpretations of Federal regulations, codes, standards, and other documents applicable to CPS design, procurement, manufacturing, construction, testing, and operation.
III. POLICIES, PLANS, AND PROGRAMS	Required to work within Company and Department policies. Will supply specific details for use in program planning and scheduling.
IV. ADMINISTRATIVE DIRECTION AND COORDINATION OF PEOPLE	No direct supervisory requirements, but can coordinate work of and provide technical direction to drafting, technicians, and clerical personnel.
V. RESPONSIBILITY FOR DECISION MAKING	Decisions relating to designs, design reviews, test reporting, etc. are to be submitted to supervisor in the form of recommendations usable in communications with organizations within and outside of IP. The engineer will not have authority for independent approval of items having significant impact on cost, scope, schedule, or compliance with regulatory requirements applicable to CPS.
VI. RESPONSIBILITY FOR EXTERNAL RELATIONS	Limited contacts with external engineering consultants and vendors. The contact will usually involve a mixture of technicians and various levels of engineers from these organizations.



ILLINOIS POWER COMPANY  
**POSITION DESCRIPTION**  
SUPERVISORY, ADMINISTRATIVE AND PROFESSIONAL POSITIONS

POSITION TITLE: Supervising Engineer

DEPARTMENT: Nuclear Station  
Engineering

POSITION CODE: 330

LOCATION: Decatur Headquarters

REPORTING TO: Supervisor

DATE: 4/28/81

**RESPONSIBILITIES:**

Implement the policies and objectives of IP in the design and operational analysis activities of the Clinton Power Station.

**DUTIES:**

1. Establish those activities related to the design process which assure that design work has been performed in accordance with applicable requirements, and that adequate records are generated to substantiate the validity of the design, both with regard to immediate assurances to permit utilization and long-range requirements in the event that design questions arise.
2. Establish and maintain working relationships with outside organizations, including the NRC, other utilities, consultants, constructors, and others to support the interface activities associated with the Clinton Power Station.
3. Conduct optimization evaluations of various design options and establish objective evidence to establish which alternative will be most beneficial to IP. These analyses may relate to design changes, procedural modifications, or procurement activities.
4. Implement and supervise technical assessment activities of plant operations management, plant procedures, security systems, surveillance activities, technical specifications, emergency plans, and all nuclear safety-related activities within IP. The purpose of these evaluations is to establish to Company management the suitability and excellence of all levels of nuclear safety-related work.
5. As assigned, supervise the technical activities of one or more other engineers to implement a design change project. This responsibility includes multi-discipline activities wherein supervisory responsibility would continue for the duration of the project.
6. Coordinate the activities in the Section with other sections and with other departments as assigned. This responsibility will also include supervision of section's activities during extended absences of the supervisor.
7. Conduct analytical evaluations of the safety and suitability of design changes, and response to the NRC. This involves development of the technical support of licensing of the Clinton Power Station.
8. Perform other duties as identified in the Project Engineer Position Description or as assigned by the respective supervisor.

Illinois Power Company  
POSITION DESCRIPTION SUPPLEMENT  
SUPERVISORY, ADMINISTRATIVE, AND PROFESSIONAL POSITIONS

Position Title: Supervising Engineer  
Department: Nuclear Station Engineering

Position Code: 330  
Date: 4/28/81

FACTOR	SUBSTANTIATING INFORMATION
I. KNOWLEDGE AND EXPERIENCE	<p>A. Education - BS degree in engineering discipline or related sciences.</p> <p>B. In addition to experience required for Project Engineer, should have ten years in meaningful engineering design and analysis or equivalent experience, and an ability to direct the technical activities of other engineers.</p>
II. ORIGINAL THINKING	<p>In addition to the abilities of the Project Engineer, as assigned the individual is expected to provide leadership for the project team on complex, multi-discipline analysis and design assignments. Required to regularly develop or direct the overall Department or Company interpretation of Federal regulations, codes, standards, and other documents applicable to CPS design, procurement, manufacturing, construction, testing, and operation.</p>
III. POLICIES, PLANS, AND PROGRAMS	<p>Develop and recommend Section and Department plans and procedures to meet the Company commitments and regulatory requirements.</p>
IV. ADMINISTRATIVE DIRECTION AND COORDINATION OF PEOPLE	<p>A. Supervise assigned engineering and clerical personnel.</p> <p>B. Supervise the activities of the Section as assigned, or during the absences of the Supervisor.</p> <p>C. Coordinate and direct multi-department input related to design of plant systems to assure effective evaluation and use.</p> <p>D. Direct the design work of consulting engineers and contractors.</p> <p>E. Prepare input into performance evaluation of assigned engineers and assist in appropriate technical development program.</p>
V. RESPONSIBILITY FOR DECISION MAKING	<p>This is the highest level of engineering decision making. Sound judgment is required to accurately determine the economical, reliability, and operational impacts of alternatives. Decision errors directly affect the cost of installation, operation, and maintenance and thus ultimately the reliability and energy cost of Company generating facilities.</p>
VI. RESPONSIBILITY FOR EXTERNAL RELATIONS	<p>A. Coordinate the design work of consulting engineering and contractors.</p> <p>B. Conduct special studies with other departments and companies to analyze design practices and performances.</p> <p>C. Provide technical guidance and coordination to construction and operating personnel on assigned projects.</p> <p>D. Represent IP to various groups, including NRC, other utilities, and various equipment vendors.</p>



ILLINOIS POWER COMPANY  
POSITION DESCRIPTION  
SUPERVISORY, ADMINISTRATIVE AND PROFESSIONAL POSITIONS

POSITION TITLE: Project Engineer

DEPARTMENT: Nuclear Station  
Engineering Department

POSITION CODE: 331

LOCATION: Decatur Headquarters

REPORTING TO: Supervisor

DATE: 4/29/81

RESPONSIBILITIES: Conduct analytical evaluations on the performance of all plant systems to establish operation in accordance with the system design basis.

- DUTIES:
1. Direct engineering and design activities of consultants and others, and design new systems and modifications for assigned power plant projects.
  2. Provide guidance and direction to other engineers, clerks and drafting personnel to implement those activities related to completion of the assigned projects.
  3. Conduct analytical evaluations of the performance of all plant systems, including heat transfer, hydro-dynamic, hydraulic, metallurgical, mechanical, electrical and structural aspects and compare this performance to the design basis and evaluate for possible changes to design.
  4. Conduct calculations and analysis necessary to establish the Nuclear Safety of proposed system designs to support licensing them.
  5. As assigned, represent the Company through participation in various industry organizations including owners groups, AEF working groups and other engineering groups to benefit from industry developments and apply these resources as available.
  6. Recommend the technical requirements for procurement and installation of material, equipment, systems, and services to support design, operation, and modification of the Clinton Power Station. This includes the technical specifications as originally issued for bids, pre-award revisions, and post-award design changes or revisions based on shop, fabrication, testing, and as-built drawings.
  7. Establish the documentation requirements for the activities of the Nuclear Station Engineering Department to ensure that such documentation meets applicable regulations and Company commitments.

Project Engineer (continued)

8. Perform other duties as identified in the Staff Engineer Position description or as assigned by the respective supervisor.

Illinois Power Company  
POSITION DESCRIPTION SUPPLEMENT  
SUPERVISORY, ADMINISTRATIVE, AND PROFESSIONAL POSITIONS

Position Title: Project Engineer

Position Code: 331

Department: Nuclear Station Engineer

Date: 4/28/81

FACTOR	SUBSTANTIATING INFORMATION
I. KNOWLEDGE AND EXPERIENCE	<p>Minimum Education - BS degree in engineering discipline or related sciences.</p> <p>In addition to experience required for Staff Engineer, should have eight years of meaningful engineering or equivalent design and/or analysis, and should be familiar with NRC regulations, ASME, IEEE, and other applicable industry codes and standards.</p>
II. ORIGINAL THINKING	<p>Need ability to organize, design, lay out, and analyze needs of plant systems and components. Must be able to detect faults in designs, specifications, drawings, and procedures--through review and analysis--and to recommend alternate solutions. Must be able to assist with testing of plant equipment/systems, to trouble-shoot, to uncover cases of malfunction, and recommend appropriate modifications. Often will have responsibilities for more than one project. Required to regularly evaluate proposed Department and Company interpretations of regulatory requirements and to develop suitable procedures and methods of compliance.</p>
III. POLICIES, PLANS, AND PROGRAMS	<p>The incumbent will be responsible for developing procedures to control design and analysis activities of the Section. These activities include procurement, design control, testing, and other programs as required.</p>
IV. ADMINISTRATIVE DIRECTION AND COORDINATION OF PEOPLE	<p>A. Direct the activities of assigned clerical personnel.</p> <p>B. Direct the training and design work of less experienced engineers.</p> <p>C. Coordinate and direct multi-department input related to design of plant systems to assure effective evaluation and use.</p> <p>D. Direct the design work of consulting engineers and contractors.</p>
V. RESPONSIBILITY FOR DECISION MAKING	<p>This position involves major responsibilities in conducting design analysis and implementing other design activities. Decision errors directly affect the cost of installation, operation, and maintenance and thus ultimately the reliability and energy cost of Company generating facilities.</p>
VI. RESPONSIBILITY FOR EXTERNAL RELATIONS	<p>Extensive contact with external consultants, vendors, Government agencies, and other utilities. The contacts will usually involve a mixture of engineers, supervisors, and managers from these organizations.</p>

ILLINOIS POWER COMPANY  
**POSITION DESCRIPTION**  
SUPERVISORY, ADMINISTRATIVE AND PROFESSIONAL POSITIONS

POSITION TITLE:	Manager of Nuclear Station Engineering	DEPARTMENT:	Nuclear Station Engineering
POSITION CODE:	479	LOCATION:	Decatur Headquarters
REPORTING TO:	Vice President, Nuclear Station Engineering	DATE:	July 17, 1981

RESPONSIBILITIES:

Manage and direct the activities of the Nuclear Station Engineering Department as required for engineering and design of modifications to nuclear power stations.

DUTIES:

1. Development and implementation of Nuclear Station Engineering Department plans, programs, and procedures.
2. Determination of staffing requirements for the Nuclear Station Engineering Department.
3. Authorization of Training Programs for Department personnel.
4. Management guidance and review of supervisory activities within the Nuclear Station Engineering Department.
5. Management interfacing with other IP departments and/or outside organizations.
6. Other duties as assigned by the Vice President responsible for Nuclear Station Engineering.

Illinois Power Company  
POSITION DESCRIPTION SUPPLEMENT  
SUPERVISORY, ADMINISTRATIVE, AND PROFESSIONAL POSITIONS

Position Title: Manager of Nuclear Station Engineering  
Department: Nuclear Station Engineering

Position Code: 479  
Date: 7/17/81

FACTOR	SUBSTANTIATING INFORMATION
I. KNOWLEDGE AND EXPERIENCE	Minimum Education-BS in one of the major branches of engineering. Experience-At least ten years in meaningful engineering design and supervisory responsibilities related to design. Also, significant experience with regulatory problems, quality assurance, and records management. Some experience with plant operations and construction is highly desirable. This experience should be first-hand, on-site with emphasis on planning, work control, supervision, and follow-on work from one or more projects to subsequent (cont.)
II. ORIGINAL THINKING	a. Incumbent must be able to analyze engineering problems in project design, procurement, field engineering, testing, and checkout. Must manage systems for development of plans, drawings, specifications, and procedures for a wide variety of projects. b. Incumbent must be able to differentiate between good and bad proposed resolutions to management and supervisory problems. The ability to recognize differences between proposed resolutions with regard to cost effectiveness, operational implications, (cont.)
III. POLICIES, PLANS, AND PROGRAMS	a. Development of Departmental plans, policies, and programs are primary responsibilities. b. The application of such policies, plans, and programs frequently and extensively crosses Departmental lines. Coordination and joint efforts are required for engineering assistance from Power Production, Environmental Affairs, Construction, and Purchasing Departments. The policies, plans, and programs of the Nuclear Station Engineering Department directly affect the other (cont.)
IV. ADMINISTRATIVE DIRECTION AND COORDINATION OF PEOPLE	Positions supervised include six to ten first-line supervisors and two to three second-line supervisors. The number will vary, depending upon the work load of the Department. Organizing and directing the Department require accommodation of the wide range of requirements of the other departments which depend upon Nuclear Station Engineering for assistance. Evaluating personnel (approximately 55 at this time) ranges from administrative clerical through technical and technical supervisory positions.
V. RESPONSIBILITY FOR DECISION MAKING	Decisions made by this position involve the approval of proposed project plans for design, field engineering, quality control, and licensing. The impact of errors in judgment by the incumbent in this position could exceed hundreds of millions of dollars in costs and operating efficiencies. Mistakes involving regulatory requirements and unacceptable design decisions could be very serious.
VI. RESPONSIBILITY FOR EXTERNAL RELATIONS	This position's contacts with external parties involve consultants, engineering firms, Government agencies, industrial customers, and local organizations related to new generating stations or modifications to existing units. External to the Department but within the Company, this position provides guidance and direction for inter-departmental work by others and performs direct contacts with other Department Managers.

- I projects where experience can be applied. Heavy emphasis on direct working experience with codes, standards, regulations, and industry practice with regard to impact on costs, schedules, and project management problems.
- II. construction difficulties, and regulatory compliance is essential.
- III. departments. Those departments use the drawings, specifications, and other documents which describe technical requirements of Nuclear Station Engineering Department. The QA programs and licensing support can impose significant restraints upon other departments. Sound, straightforward, well-balanced policies, plans, and programs are required of the work performed within the Department.



ILLINOIS POWER COMPANY  
POSITION DESCRIPTION  
SUPERVISORY, ADMINISTRATIVE AND PROFESSIONAL POSITIONS

POSITION TITLE: Supervisor-Technical Assessment DEPARTMENT: Nuclear Station Engineering  
POSITION CODE: 753 LOCATION: Decatur Headquarters  
REPORTING TO: Director-Nuclear Safety and Engineering Analysis DATE: January 15, 1981

RESPONSIBILITIES: Supervise the NSED Technical Assessment Section to provide technical support to the operations staff at the Clinton Power Station.

DUTIES:

1. Supervise the activities of the Technical Assessment group. This Independent Safety Engineering Group is responsible for review of all Safety related activities associated with the operation of the CPS facility. The review functions of the Independent Safety Engineering Group will, as a minimum, include the following:

Evaluation for technical adequacy and clarity of all procedures important to the safe operation of the facility.

Evaluation of plant operations from a safety perspective.

Comparison of the operating experience of the plant and plants of similar design.

Assessment of the plant performance regarding conformance to requirements related to safety.

Any other matter involving safe operation of the nuclear power plant than an independent review deems appropriate for consideration.

Assessment of plant safety programs.

2. Provide technical support for the development and implementation of the CPS Emergency Plan, Security Plan, ISI test program, NPRD data management system or other technical activities as requested by the Clinton Power Station Plant manager and as directed by the Director of Nuclear Safety and Engineering Analysis.
3. Supervise the conduct of special test data review, Technical Specification review, and equipment performance analysis to insure the safety goals of IP are implemented.



Illinois Power Company  
POSITION DESCRIPTION SUPPLEMENT  
SUPERVISORY, ADMINISTRATIVE, AND PROFESSIONAL POSITIONS

Position Title: Supervisor Technical Assessment  
Department: Nuclear Station Engineering Department

Position Code: 753  
Date: 1/15/81

FACTOR	SUBSTANTIATING INFORMATION
I. KNOWLEDGE AND EXPERIENCE	<p>Education - The incumbent must possess a B. S. degree in any branch Engineering.</p> <p>Experience - The incumbent must possess a minimum of 5 years of experience in the Nuclear Power industry. This experience should preferably be at an operating Nuclear Station, or related to the CPS project.</p>
II. ORIGINAL THINKING	<p>The incumbent must possess the capacity to evaluate the operation of plant systems and perceive potential problems before they occur. This includes locating operating information from other plants, and translating this to identify potential problems at CPS.</p>
III. POLICIES, PLANS, AND PROGRAMS	<p>The incumbent will be responsible for implementation of an Independent Safety Engineering group. This group will review the operation of the CPS and provide IP with a technical assessment of plant operation. In addition the incumbent will be responsible for evaluation of information from other operating plants and recommend changes to CPS programs based on this operating experience.</p>
IV. ADMINISTRATIVE DIRECTION AND COORDINATION OF PEOPLE	<p>Responsible for the supervision of 4-10 Engineers. This group is stationed at the CPS site and are involved with an indepth technical assessment of plant operation. Significant interface capability is required with CPS operations and technical personnel. Coordination with all Company technical personnel is required to establish this ISEG function.</p>
V. RESPONSIBILITY FOR DECISION MAKING	<p>The incumbent will have significant responsibility to evaluate plant operations and ensure safety goals of IP are implemented. He will be regularly making decisions which will significantly affect the operation of the plant.</p>
VI. RESPONSIBILITY FOR EXTERNAL RELATIONS	<p>This position will involve a major responsibility for external relations particularly with the NRC in establishing the safe operation at the CPS.</p>

ILLINOIS POWER COMPANY  
**POSITION DESCRIPTION**  
SUPERVISORY, ADMINISTRATIVE AND PROFESSIONAL POSITIONS

POSITION TITLE: Supervisor-Nuclear Fuel Cycle

DEPARTMENT: Nuclear Station  
Engineering

POSITION CODE: 755

LOCATION: Decatur Headquarters

REPORTING TO: Director-Nuclear Safety and  
Engineering Analysis

DATE: March 12, 1981

**RESPONSIBILITIES:**

Supervise fuel cycle activities, including development of fuel specifications and quality control criteria for fuel fabrication, conduct fuel cycle analysis, and develop operational strategy to maximize fuel utilization.

**DUTIES:**

1. Technical supervision and coordination of IP procurement of raw uranium, enrichment capacity, and fabrication of nuclear fuel for use in the Clinton Power Station.
2. Supervise IP technical personnel who monitor fuel design, manufacturing, and testing to assure that precise technical contract requirements placed on the various vendors are met.
3. Provide the overall nuclear Fuel Management Program and the technical input or guidance to ensure that CPS fuel is acquired on time at optimum cost and performance.
4. Develop and implement a fuel management information system. This system must provide to management an accurate schedule of the fuel inventory location, a description of what payments will be required, and the time these payments will be required. This will require close interface with Purchasing, Accounting, Plant Operations, and Quality Assurance Departments. It will also be subject to close NRC surveillance and control.
5. Provide technical support to Operations' activities at the Clinton Power Station. This function includes reviewing fuel handling activities to ensure no damage from handling of the fuel. It also includes monitoring fuel performance and developing a refueling schedule which optimizes fuel utilization.
6. Provide training to Engineers in the Fuel Cycle Section and to other personnel in IP involved with the fuel management program to establish and implement a successful fuel management program.
7. Perform other duties as assigned by the Director-Nuclear Safety and Engineering Analysis.

ILLINOIS POWER COMPANY  
POSITION DESCRIPTION  
SUPERVISORY, ADMINISTRATIVE AND PROFESSIONAL POSITIONS

POSITION TITLE: Supervisor-Compliance

DEPARTMENT: Nuclear Station  
Engineering

POSITION CODE: 757

LOCATION: Decatur Headquarters

REPORTING TO: Manager-Nuclear Station  
Engineering

DATE: October 29, 1980

RESPONSIBILITIES:

Supervise and coordinate all nuclear regulatory compliance technical requirements related to design, construction, and/or modification of nuclear power plants.

DUTIES:

1. Establish and maintain effective nuclear compliance and commitment control systems for coordination between IP and the NRC.
2. Establish and maintain effective nuclear compliance and commitment control systems for coordination between GE, S&L, other vendors, and IP.
3. Coordinate with the Supervisor-Licensing to assure adequate commitments input to the FSAR and other licensing documents.
4. Maintain documentation of established compliance requirements and commitments and supervise the work necessary to assure generation of suitable records.
5. Supervise the development and implementation of procedures to assure auditability for QA and the development of appropriate corrective action programs.
6. Develop training programs and implement effective training of personnel involved in compliance programs related to the Clinton Power Station.
7. Evaluate the activities of departments performing CPS-related work to ensure compatibility of intra-departmental compliance activities with overall Company commitments.
8. Act as primary interface with NRC personnel during inspections or investigations related to compliance program implementation and control.
9. Direct special engineering studies and reviews of topics related to regulatory matters in order to ensure compliance with the Bulletins/Circulars/letters/etc.
10. Other duties as assigned by the Manager-Nuclear Station Engineering.

Illinois Power Company  
POSITION DESCRIPTION SUPPLEMENT  
SUPERVISORY, ADMINISTRATIVE, AND PROFESSIONAL POSITIONS

Position Title: Supervisor-Compliance

Position Code: 757

Department: Nuclear Station Engineering

Date: 10/29/80

FACTOR	SUBSTANTIATING INFORMATION
I. KNOWLEDGE AND EXPERIENCE	Education-At least a BS degree in Engineering. Supplemental education in a second branch such as Nuclear Engineering is highly desirable. Experience-At least three years in engineering and two in supervision of technical work or equivalent experience.
II. ORIGINAL THINKING	Position requires that problems be clearly identified and solutions detailed with little or no supervision. The incumbent is often faced with conflicting objectives which must be evaluated before reaching a decision. Also requires a high degree of creativeness and resourcefulness to deal with the variety of assignments and tasks that range from assessment of preliminary engineering and conceptual design to compliance of backfits and major modifications of power plants to regulatory commitments.
III. POLICIES, PLANS, AND PROGRAMS	This incumbent is responsible for establishing and approving Section policies, plans, programs for those factors which influence the determination of commitments to regulatory agencies. The incumbent is expected to develop and recommend Department policies, plans, programs which will be applicable to planning, design, procurement, construction, modification, and licensing of CPS.
IV. ADMINISTRATIVE DIRECTION AND COORDINATION OF PEOPLE	Responsible for organizing and directing the activities of all personnel in the Compliance Section. Number may be from three to six individuals with positions varying from Engineering Clerk to Engineers. Incumbent would be responsible for evaluating their performance.
V. RESPONSIBILITY FOR DECISION MAKING	The decisions made by the incumbent are administrative, technical, and supervisory. The decisions and recommendations will affect Department policies and Company plans and programs. Judgment errors could have impact on project costs and schedules and on the reliability and availability of CPS.
VI. RESPONSIBILITY FOR EXTERNAL RELATIONS	This position requires contact with consulting engineering firms, Government agencies, sister utilities, local organizations, and manufacturers. The contacts often involve middle level management and require the ability to effectively deal with and influence all types of individuals.

ILLINOIS POWER COMPANY  
**POSITION DESCRIPTION**  
SUPERVISORY, ADMINISTRATIVE AND PROFESSIONAL POSITIONS

POSITION TITLE: Administrative Supervisor

DEPARTMENT: Nuclear Station  
Engineering

POSITION CODE: 788

LOCATION: Headquarters

REPORTING TO: Manager of Nuclear  
Station Engineering

DATE: July 17, 1981

**RESPONSIBILITIES:**

Department operating and construction budgets and cash flow plans, administrative review and support for Departmental functions, and supervision of Nuclear Station Engineering Department clerical personnel.

**DUTIES:**

1. Coordinate preparation and updating of budgets by evaluating and incorporating inputs from within and outside of the Department.
2. Establish budget/cash flow plans based upon appropriate funding, schedules, priorities, and policies.
3. Review procurement plans, requisitions, purchase orders, and contracts for their impact on budget/cash flow plans.
4. Evaluate invoice billings for correctness, determine accounting distribution, inform appropriate discipline supervisors for concurrence, and prepare release for payment authorizations.
5. Prepare periodic cost reports and distribute to authorized Department personnel.
6. Provide guidance to management for developing expenditure controls for Department-related projects.
7. Coordinate fiscal activities with other departments as required to support Nuclear Station Engineering Department work.
8. Supervise clerical personnel of the Nuclear Station Engineering Department, and ensure that they are qualified to meet Department requirements.
9. Supervise and direct the personnel and activities related to the Department Document Center. This includes development and supervision of the use of appropriate procedures and instructions.

Administrative Supervisor (continued)

10. Perform or authorize periodic reviews to identify the need for changes to administrative procedures and/or policies which may reduce costs or improve schedules.
11. Control and distribute Departmental procedures and instructions, including revisions.
12. Provide Departmental and project information for management studies and forecasts covering costs of design and construction of generation stations.
13. Perform or supervise the performance of all functions in an auditable manner to meet the requirements of applicable regulations, codes, and standards.



Illinois Power Company  
POSITION DESCRIPTION SUPPLEMENT  
SUPERVISORY, ADMINISTRATIVE, AND PROFESSIONAL POSITIONS

Position Title: Administrative Supervisor  
Department: Nuclear Station Engineering

Position Code: 788  
Date: July 17, 1981

FACTOR	SUBSTANTIATING INFORMATION
I. KNOWLEDGE AND EXPERIENCE	Minimum Education-BS Degree in either accounting or engineering. Experience-at least five years' experience (or equivalent) in budgeting and/or project cost control. Also required is knowledge of Illinois Power's accounting system and other project-related departments such as Purchasing, Data Processing, etc.
II. ORIGINAL THINKING	Individual must be capable of determining the scope and magnitude of the project as well as the involvement by other people and departments in order to develop complete total project cost estimates. Each project must be thought out on an individual basis in order to integrate all the components for an accurate concept.
III. POLICIES, PLANS, AND PROGRAMS	a. Development of plans and policies to accomplish timely completion of work is a primary responsibility. b. The application of such plans and policies frequently cross departmentaland/or Company lines, particularly with respect to coordinating efforts between the contractor, architect/engineer, and IP to identify responsibilities and total project.
IV. ADMINISTRATIVE DIRECTION AND COORDINATION OF PEOPLE	Incumbent has an Engineering Analyst, accounting clerks and stenographic personnel under his direct supervision. However, the coordination function performed goes beyond Department or Company boundaries.
V. RESPONSIBILITY FOR DECISION MAKING	The decisions made by this position are administrative and supervisory in nature. The impact of errors in judgment or omission could have major cost impact and serious effect on management decisions since some could go undetected for an extended period of time. The individual must be self-motivated to be effective.
VI. RESPONSIBILITY FOR EXTERNAL RELATIONS	This position's contacts include nearly every department within IP, as well as consultants, architect/engineering firms, and constructors. In addition, there are periodic contacts with other utilities in carrying out assigned tasks.



ILLINOIS POWER COMPANY  
**POSITION DESCRIPTION**  
SUPERVISORY, ADMINISTRATIVE AND PROFESSIONAL POSITIONS

POSITION TITLE: Supervisor-Instrumentation  
& Controls Engineering

DEPARTMENT: Nuclear Station  
Engineering

POSITION CODE: 772

LOCATION: Headquarters

REPORTING TO: Director-Design Engineering

DATE: July 17, 1981

**RESPONSIBILITIES:**

Supervise the activities of the Instrumentation and Control Section--including the supervision, training, and direction of personnel in that Section--to ensure timely support of Clinton Power Station (CPS) design and/or modification.

**DUTIES:**

1. Supervise the determination of requirements and evaluation of factors which influence CPS instrumentation and control design and result in design criteria.
2. Establish assignments for monitoring contract performance and for monitoring the technical and economic aspects of the plant designs prepared by consulting engineers and others.
3. Provide and assign technical support to other departments and sections as required.
4. Review and comment on inspection and test programs and assist in the evaluation of test results.
5. Prepare and review work assignments to meet schedule requirements.
6. Develop training programs for the personnel in the Instrumentation and Control Section to expand their expertise.
7. Prepare instructions which identify specific responsibilities and interface control to achieve project control.
8. Establish staffing requirements to support schedule commitments and assist the Department Manager in meeting these requirements.
9. Provide technical guidance to the Instrumentation and Control Engineering Staff.
10. Perform other duties as assigned by the Department Manager.

Illinois Power Company  
POSITION DESCRIPTION SUPPLEMENT  
SUPERVISORY, ADMINISTRATIVE, AND PROFESSIONAL POSITIONS

Position Title: Supervisor-Instrumentation & Controls Eng. Position Code: 772  
Department: Nuclear Station Engineering Date: July 17, 1981

FACTOR	SUBSTANTIATING INFORMATION
I. KNOWLEDGE AND EXPERIENCE	A BS degree in the appropriate discipline plus ten years of supervising or directing the activities of engineers.
II. ORIGINAL THINKING	The individual is expected to provide leadership in areas of design where there is a low degree of replication and often conflicting requirements.
III. POLICIES, PLANS, AND PROGRAMS	The individual in this position is expected to establish training programs for members of the Section. The position has input to Departmental policies and programs. The individual is expected to establish and review plans and schedules involving design projects.
IV. ADMINISTRATIVE DIRECTION AND COORDINATION OF PEOPLE	This position is responsible for the supervision of the individuals in the Section and the overall coordination of their activities. The Supervisor is expected to evaluate the performance of the personnel in the Section. The individual must identify the future work load and organize the job assignments to meet the job requirements interim of skills and experience levels.
V. RESPONSIBILITY FOR DECISION MAKING	This position is responsible for reviewing and monitoring all decisions made within the Section. The individual is expected to recognize the impact of errors in judgment and act accordingly. Due to the nature of the design effort, errors in judgment can have a high impact on capital and O&M costs.
VI. RESPONSIBILITY FOR EXTERNAL RELATIONS	The individual in this position is responsible for the actions of the members of the Section. In addition, the individual resolves conflicts which may develop as the result of the differing requirements of the organizations involved.

ILLINOIS POWER COMPANY  
**POSITION DESCRIPTION**  
SUPERVISORY, ADMINISTRATIVE AND PROFESSIONAL POSITIONS

POSITION TITLE: Supervisor - Electrical  
Engineering

DEPARTMENT: Nuclear Station  
Engineering

POSITION CODE: 798

LOCATION: Headquarters

REPORTING TO: Director-Design Engineering

DATE: July 17, 1981

**RESPONSIBILITIES:**

Supervise the activities of the Electrical Section--including the supervision, training, and direction of personnel in that Section--to ensure timely support of Clinton Power Station (CPS) design and/or modification.

**DUTIES:**

1. Supervise the establishment of requirements and evaluation of factors which influence CPS electrical design and result in design criteria.
2. Make assignments for monitoring contract performance and for monitoring the technical and economic aspects of the plant designs prepared by consulting engineers and others.
3. Provide and assign technical support to other departments and sections as required.
4. Review and comment on inspection and test programs and assist in the evaluation of test results.
5. Prepare and review work assignments to meet schedule requirements.
6. Develop and administer training programs for the personnel in the Electrical Section.
7. Prepare specific section instructions necessary to execute Department-approved work methods, and to insure identification and coordination of interfaces with other Departments..
8. Establish staffing requirements to support schedule commitments and assist the Department Manager in meeting these requirements.
9. Provide technical guidance to the Electrical Engineering staff.
10. Perform other duties as assigned by the Department Manager.

Illinois Power Company  
POSITION DESCRIPTION SUPPLEMENT  
SUPERVISORY, ADMINISTRATIVE, AND PROFESSIONAL POSITIONS

Position Title: Supervisor - Electrical Engineering

Position Code: 798

Department: Nuclear Station Engineering

Date: July 17, 1981

FACTOR	SUBSTANTIATING INFORMATION
I. KNOWLEDGE AND EXPERIENCE	<p>Education - At least a BS degree in Electrical Engineering with advanced course study in same field. Supplemental education in a second branch such as Nuclear Engineering is highly desirable.</p> <p>Experience - At least ten years in Electrical Engineering and Design or other related work.</p>
II. ORIGINAL THINKING	<p>Position requires that problems be clearly identified and solutions detailed with little or no supervision. The incumbent is often faced with conflicting objectives which must be evaluated before reaching a decision. Also requires a high degree of creativeness and resourcefulness to deal with the variety of assignments and tasks that range from preliminary engineering and conceptual design to backfits and major modifications of CPS.</p>
III. POLICIES, PLANS, AND PROGRAMS	<p>This incumbent is responsible for establishing and approving Section policies, plans and programs for those factors which influence the electrical design involved with the addition or modification of CPS. The incumbent is expected to develop and recommend Department policies, plans and programs which will be applicable to planning, design, procurement, construction, modification, and licensing of CPS.</p>
IV. ADMINISTRATIVE DIRECTION AND COORDINATION OF PEOPLE	<p>Responsible for organizing and directing the activities of all personnel in the Electrical Section. Number may be from six to ten individuals with positions varying from Engineering Clerk to Station Design Engineers. Incumbent would be responsible for evaluating their performance.</p>
V. RESPONSIBILITY FOR DECISION MAKING	<p>The decisions made by the incumbent are administrative, technical, and supervisory. The decisions and recommendations will affect Department policies and Company plans and programs. Judgment errors could have impact on project costs and schedules and on the reliability and availability of CPS.</p>
VI. RESPONSIBILITY FOR EXTERNAL RELATIONS	<p>This position requires contact with consulting engineering firms, government agencies, sister utilities, local organizations, and manufacturers. The contacts often involve middle level management and requires the ability to effectively deal with and influence all types of individuals.</p>

ILLINOIS POWER COMPANY  
**POSITION DESCRIPTION**  
SUPERVISORY, ADMINISTRATIVE AND PROFESSIONAL POSITIONS

POSITION TITLE: Supervisor-Civil/Structural	DEPARTMENT: Nuclear Station Engineering
POSITION CODE: 809	LOCATION: Headquarters
REPORTING TO: Director-Design Engineering	DATE: July 17, 1981

**RESPONSIBILITIES:**

Supervision of the activities of the Civil/Structural Section of the Department. Assignments and scheduling of work, including training and direction of personnel in the Section to ensure timely support of Clinton Power Station (CPS) design and/or modifications.

**DUTIES:**

1. Supervise the determination of requirements and evaluation of factors which influence CPS civil/structural design and resulting design criteria.
2. Establish assignments for monitoring the technical and economic aspects of the plant designs prepared by consulting engineers and others.
3. Establish methods for controlling or monitoring contract performance for accomplishing Department-related work.
4. Provide and supervise technical support as the Department may need for CPS plant modifications and technical assistance to station operations.
5. Supervise the review and approval of inspection and test programs and evaluate test results as they relate to civil/structural features of CPS.
6. Maintain cognizance of civil/structural engineering requirements applicable to CPS plant design.
7. Develop and supervise training programs for civil/structural personnel in the Department.
8. Establish staffing requirements to support schedule commitments and assist the Department Manager in meeting these requirements.
9. Perform other duties as assigned by the Department Manager.

Illinois Power Company  
POSITION DESCRIPTION SUPPLEMENT  
SUPERVISORY, ADMINISTRATIVE, AND PROFESSIONAL POSITIONS

Position Title: Supervisor-Civil/Structural Engineering

Position Code: 809

Department: Nuclear Station Engineering

Date: July 17, 1981

FACTOR	SUBSTANTIATING INFORMATION
I. KNOWLEDGE AND EXPERIENCE	<p>Education - Must have a BS degree in Civil Engineering with a regimen of study in structural engineering.</p> <p>Experience - An intimate knowledge of such codes as AISC, ACI, ASME Sect. III, UBC, NFPA, and AWS is required. Registration as a Structural Engineer in the State of Illinois is desirable. A minimum of ten years' extensive progressive experience in both design and construction is mandatory.</p>
II. ORIGINAL THINKING	<p>Must be able to clearly identify and analyze C/S-related engineering design, procurement, testing, and operating problems and provide guidance to subordinates in the development of solutions to such problems. Requires creativeness and resourcefulness to deal with a variety of assignments and tasks ranging from preliminary engineering and conceptual design to modifications at CPS. Must be able to discern propriety or impropriety in proposed solutions and to choose or offer compromise as appropriate.</p>
III. POLICIES, PLANS, AND PROGRAMS	<p>Develop and recommend Section and/or Department policies, plans, schedules, and programs related to abovementioned design, review, and personnel supervision in connection with new or additions or modifications to existing nuclear power plants.</p>
IV. ADMINISTRATIVE DISTRIBUTION AND COORDINATION OF PEOPLE	<p>Responsible for organizing, directing activities, and evaluating performance of all personnel in the C/S Section, and for coordinating their activities with those of IP and other companies in the execution of assigned duties.</p>
V. RESPONSIBILITY FOR DECISION MAKING	<p>Decisions are administrative, technical, and supervisory and can have substantial influence on Company plans and programs. Judgment errors could result in loss of significant amounts of time and money and could affect reliability and availability of new and existing nuclear power plants. Evaluates recommendations from A/E's, consultants, constructors, etc., and approves final recommendations prior to presentation to the Department Manager.</p>
VI. RESPONSIBILITY FOR EXTERNAL RELATIONS	<p>Dealings with A/E's, consultants, government agencies, other utilities, vendors, and inter-departmental groups at IP. Contacts may require involvement with middle-level management and ability to effectively deal with all types of individuals.</p>



ILLINOIS POWER COMPANY  
**POSITION DESCRIPTION**  
SUPERVISORY, ADMINISTRATIVE AND PROFESSIONAL POSITIONS

POSITION TITLE: Supervisor-  
Construction Engineering

DEPARTMENT: Nuclear Station  
Engineering

POSITION CODE: 846

LOCATION: Clinton Site

REPORTING TO: Director-Design Engineering

DATE: July 17, 1981

**RESPONSIBILITIES:**

Clinton Power Station site engineering performed by IP personnel to support construction and/or operations activities.

**DUTIES:**

1. Supervise and coordinate site engineering interfaces with outside organizations (including liaison between the Constructor and the Architect/Engineer).
2. Review, approve, and expedite processing of site-initiated design changes or deviations from existing design requirements, i.e., Field Change Requests (FCRs), Nonconformance Reports (NCRs), and Field Problem Reports (FPRs).
3. Provide technical support to Construction and/or Operations in the areas of design document interpretation and equipment/system performance evaluation.
4. Maintain surveillance of the current list of design documents approved for field use and provide assistance to document/records personnel in performance of their duties.
5. Review construction priorities which affect the design effort and provide direction to the Architect/Engineer.
6. Establish staffing requirements for implementation of the foregoing duties and responsibilities.
7. Provide overall supervision of the site engineering staff, consisting of both Company and Architect/Engineer personnel.
8. Make recommendations to the Director-Design Engineering that result in lower plant engineering and construction costs and/or plant operating efficiencies.
9. Provide engineering support to the Director-Design Engineering.



Illinois Power Company  
POSITION DESCRIPTION SUPPLEMENT  
SUPERVISORY, ADMINISTRATIVE, AND PROFESSIONAL POSITIONS

Position Title: Supervisor-Construction Engineering

Position Code: 846

Department: Nuclear Station Engineering

Date: July 17, 1981

FACTOR	SUBSTANTIATING INFORMATION
I. KNOWLEDGE AND EXPERIENCE	Minimum of BS degree in civil/structural, electrical, or mechanical engineering required, with formal training (or suitable experience) in all three disciplines desirable. Four-six years' experience in power plant design and/or construction necessary, and some experience in power plant operations would be desirable. Should have engineering supervision experience, and cognizant of quality assurance, regulatory, and nuclear records requirements.
II. ORIGINAL THINKING	Position requires <u>timely</u> decisions on a variety of design/construction problems, many of which may be unfamiliar, covering major engineering disciplines. Innovative thinking tempered by practical judgment and common sense is necessary to ameliorate the impact of these decisions on design, construction, schedule, and costs. The incumbent must be able to analyze interface and procedural problems and determine and "sell" an approach to resolve them.
III. POLICIES, PLANS, AND PROGRAMS	Development of Section (i.e., NSED Construction) policies, plans, programs, procedures, and instructions are primary responsibilities. Close coordination with A/E, construction, and IP's construction organization (Clinton Project Management) are required to effectively carry out this responsibility due to extremely active interfaces with these organizations. Also, position has a responsibility to support the Director-Design Engineering and Project Manager in development of Departmental policy.
IV. ADMINISTRATIVE DIRECTION AND COORDINATION OF PEOPLE	Overall supervision of the Construction Engineering Section, consisting of NSED technical personnel, architect/engineer discipline liaison engineers, and IP clerical personnel. Responsible for evaluating NSED technical personnel per Company procedures and evaluating A/E personnel on a "retain or replace" basis.
V. RESPONSIBILITY FOR DECISION MAKING	Primary decisions made by position are relative to field initiated design change requests (FCRs) and construction deviations from the design (NCRs). Errors in judgment could have serious cost, schedule, regulatory, and plant operating impacts. On a project of this magnitude, such mistakes in judgment could amount to millions of dollars in direct and/or indirect costs. Additionally, many technical, interface, supervisory, and administrative decisions are required.
VI. RESPONSIBILITY FOR EXTERNAL RELATIONS	Daily interface with the architect/engineer (both local--see Item IV--and home office), the constructor, and the Company's construction organization (Project Management). Less frequent interfaces include Government agencies (USNRC, State Radiological Health), project equipment and services suppliers, project partners (Co-ops), and other utilities and other Company departments.

ILLINOIS POWER COMPANY  
**POSITION DESCRIPTION**  
SUPERVISORY, ADMINISTRATIVE AND PROFESSIONAL POSITIONS

POSITION TITLE:	Supervisor - Licensing	DEPARTMENT:	Nuclear Station Engineering
POSITION CODE:	852	LOCATION:	Headquarters
REPORTING TO:	Manager of Nuclear Station Engineering	DATE:	July 17, 1981

RESPONSIBILITIES:

Supervise and coordinate all nuclear licensing requirements related to the design, construction, and/or modification of nuclear power plants.

DUTIES:

1. Establish and maintain effective nuclear licensing control between IP and regulatory agencies.
2. Establish and maintain effective controls within the Company to assure compliance with the nuclear regulatory licensing requirements.
3. Ensure that all nuclear licensing requirements are met in a timely manner.
4. Control licensing and permit activities with counsel, consultants, and contractors as required to ensure implementation.
5. Develop and implement Departmental and Company nuclear regulatory guidance programs.
6. Supervise assigned personnel in the performance of Licensing duties.
7. Perform other duties as required and assigned.

Illinois Power Company  
POSITION DESCRIPTION SUPPLEMENT  
SUPERVISORY, ADMINISTRATIVE, AND PROFESSIONAL POSITIONS

Position Title: Supervisor - Licensing  
Department: Nuclear Station Engineering

Position Code: 852  
Date: July 17, 1981

FACTOR	SUBSTANTIATING INFORMATION
I. KNOWLEDGE AND EXPERIENCE	<p>Educational Requirements - at least a BS degree in a science or engineering field. Supplemental education in nuclear science or engineering is highly desirable. Supervisor/management training and experience.</p> <p>Experience - at least ten years in nuclear licensing activities. Significant experience with nuclear regulatory problems and working knowledge of nuclear industry codes, standards and regulations. Capability to serve as recognized authority within (cont.)</p>
II. ORIGINAL THINKING	<p>Analysis of regulatory requirements and new regulations and projection of their interpretations to the Company's specific cases. Analysis of regulatory practice and organizational behavior and determination of best course for Company based on such analyses. Incumbent must be able to analyze licensing problems in the nuclear engineering and environmental areas. Work assignments are largely conducted independently with little or no supervision and actions are taken for which there is little precedent. (cont.)</p>
III. POLICIES, PLANS, AND PROGRAMS	<p>a. Development of plans, programs, procedures, and instructions for the Licensing Section.</p> <p>b. Supervision of personnel carries the responsibility for assuring adherence to Company policies and Department procedures.</p> <p>c. Implementation of licensing plans and programs routinely extends throughout the Company organization.</p>
IV. ADMINISTRATIVE DIRECTION AND COORDINATION OF PEOPLE	<p>Supervision and evaluation of personnel for licensing engineering.</p>
V. RESPONSIBILITY FOR DECISION MAKING	<p>The decisions made by this position are administrative, technical and supervisory. The impact of an error in judgment in the planning, scheduling, and implementation of licensing plans and programs could have major cost impact to the Company if not detected by attorneys, reviewing staff, or other levels of supervision. Timely licensing is essential for nuclear power plants and licensing delays can result in costs of several hundred thousand dollars daily. Numerous and varied commitments made (cont.)</p>
VI. RESPONSIBILITY FOR EXTERNAL RELATIONS	<p>This position is the communications focus between the Company and the Government nuclear regulatory agency. The position interfaces and coordinates licensing activities between the Company and legal counsel, consultants, and contractors.</p>

- I. the Company in nuclear licensing.
- II. Examples of need for creativeness and resourcefulness elements are: 1) Develop guidance programs for compliance to nuclear regulatory requirements and verification of Company commitments.
- V. to regulatory agencies via licensing documents legally bind the Company in the design, construction, and operation of nuclear power plants.

ILLINOIS POWER COMPANY  
**POSITION DESCRIPTION**  
SUPERVISORY, ADMINISTRATIVE AND PROFESSIONAL POSITIONS

POSITION TITLE: Supervisor-Mechanical  
Engineering

DEPARTMENT: Nuclear Station  
Engineering

POSITION CODE: 865

LOCATION: Headquarters

REPORTING TO: Director-Design Engineering

DATE: July 17, 1981

**RESPONSIBILITIES:**

Supervise the activities of the Mechanical Section--including the supervision, training, and direction of personnel in that Section--to ensure timely support of Clinton Power Station (CPS) design and/or modification.

**DUTIES:**

1. Supervise the determination of requirements and evaluation of factors which influence CPS mechanical design and result in design criteria.
2. Make assignments for monitoring contract performance and for monitoring the technical and economic aspects of the plant designs prepared by consulting engineers and others.
3. Provide and assign technical support to other departments and sections as required.
4. Review and comment on inspection and test programs and assist in the evaluation of test results.
5. Prepare and review work assignments to meet schedule requirements.
6. Develop and administer training programs for the personnel in the Mechanical Section.
7. Prepare specific Section instructions necessary to execute Department-approved work methods and to ensure identification and coordination of interfaces with other departments.
8. Establish staffing requirements to support schedule commitments and assist the Department Manager in meeting these requirements.
9. Provide technical guidance to the Mechanical Engineering staff.
10. Perform other duties as assigned by the Department Manager.

Illinois Power Company  
POSITION DESCRIPTION SUPPLEMENT  
SUPERVISORY, ADMINISTRATIVE, AND PROFESSIONAL POSITIONS

Position Title: Supervisor - Mechanical Engineering  
Department: Nuclear Station Engineering

Position Code: 865  
Date: July 17, 1981

FACTOR	SUBSTANTIATING INFORMATION
I. KNOWLEDGE AND EXPERIENCE	<p>Minimum Education-BS degree in one of the major branches of engineering or related sciences.</p> <p>Experience-At least ten years of a combination of related engineering, processing, design, testing, operation, and construction. Supervisory experience is desirable. Must be familiar with applicable codes and standards, quality assurance, and inspection techniques.</p>
II. ORIGINAL THINKING	<p>Must be able to analyze engineering related design, procurement, testing, and operating problems, and provide guidance to subordinates in the development of solutions to such. Must be able to discern propriety or impropriety in proposed solutions and to choose or offer compromise as appropriate.</p>
III. POLICIES, PLANS, AND PROGRAMS	<p>Must be prepared by experience to develop and recommend department policies, plans, schedules, and programs related to the proper execution of responsibilities for above mentioned design, design review, and personnel supervision. Also will develop and approve related section policies, plans, schedules and programs.</p>
IV. ADMINISTRATIVE DIRECTION AND COORDINATION OF PEOPLE	<p>Through a combination of experience and training, is to be able to direct activities of subordinates and coordinate their activities with those of IP and other companies in the execution of assigned duties. These can be related to multi-projects and varied groups of people.</p>
V. RESPONSIBILITY FOR DECISION MAKING	<p>Decisions related to the approval of design change recommendations, procurement actions, quality control, and testing procedures can involve millions of dollars; incorrect decisions could result in loss of significant amounts of time and money. Responsible for review and formulation of such recommendations or evaluating similar recommendations from A-E's consultants, constructors, etc., and approving final recommendations prior to presentation to the Department Manager.</p>
VI. RESPONSIBILITY FOR EXTERNAL RELATIONS	<p>Dealings with architect-engineer, engineering consultants, vendors, environmental agencies and consultants, and other utilities are continuing requirements of this position.</p>



ILLINOIS POWER COMPANY  
**POSITION DESCRIPTION**  
SUPERVISORY, ADMINISTRATIVE AND PROFESSIONAL POSITIONS

POSITION TITLE: Supervisor-  
Safety Analysis

DEPARTMENT: Nuclear Station  
Engineering

POSITION CODE:

LOCATION: Decatur Headquarters

REPORTING TO: Director-Nuclear Safety  
& Engineering Analysis

DATE: July 17, 1981

**RESPONSIBILITIES:**

Direct Department activities related to technical analysis, including the supervision, training, and direction of personnel to ensure timely support of Clinton Power Station (CPS) design and/or modifications.

**DUTIES:**

1. Determine requirements for and evaluate factors which influence plant system analyses and design.
2. Control consulting and engineering contract performance for technical evaluations of plant designs and performance.
3. Provide technical support to other departments supporting design, procurement, construction, and operation of CPS.
4. Assist in the preparation and implementation of inspection and test programs and direct the evaluation of test results.
5. Prepare and review work assignments to meet engineering, construction, and operating schedule commitments.
6. Develop training programs to assure the availability of expertise of Department personnel as necessary to accomplish their assigned responsibilities.
7. Provide technical guidance to Department personnel.
8. Perform other duties as assigned by the Manager of Nuclear Station Engineering Department.



Illinois Power Company  
POSITION DESCRIPTION SUPPLEMENT  
SUPERVISORY, ADMINISTRATIVE, AND PROFESSIONAL POSITIONS

Position Title: Supervisor-Safety Analysis  
Department: Nuclear Station Engineering

Position Code: \_\_\_\_\_  
Date: 7/17/81

FACTOR	SUBSTANTIATING INFORMATION
I. KNOWLEDGE AND EXPERIENCE	Minimum Education-BS in one of the major branches of engineering.  Experience-At least eight years of meaningful engineering design or system analysis on nuclear power plants. Require working knowledge of ASME, NRC, and other applicable codes and industry standards. Must have demonstrated leadership ability in work-related activities.
II. ORIGINAL THINKING	Must be able to analyze engineering problems in system design, piping, and structural analysis. Requires project design, testing, and procurement experience. Shall generate and obtain the functional requirement for all power plant equipment. Shall motivate, counsel, and train people in his Section.
III. POLICIES, PLANS, AND PROGRAMS	Preparation of Section policies, programs, and plans. Advisor to management on plans, policies, or programs established by others. Establish Section procedures and monitor the compliance.
IV. ADMINISTRATIVE DIRECTION AND COORDINATION OF PEOPLE	Responsible for directing and evaluating the performance of assigned personnel. The number will vary, depending on Section's work load. Requires significant coordination with Mechanical, Electrical, C&I, and Licensing Sections of Nuclear Station Engineering Department. Shall be able to organize and coordinate inter-departmental task forces.
V. RESPONSIBILITY FOR DECISION MAKING	Decisions made by this position could have substantial influence on Company courses of action and compliance stature. The impact of errors in judgment could be serious. Has primary authority for the correct and complete design criteria, safety analyses, and performance evaluations of nuclear safety-related equipment, materials, and systems.
VI. RESPONSIBILITY FOR EXTERNAL RELATIONS	Position establishes and controls contacts involving engineering firms, vendors, inter-departmental groups at IP, and other utilities. The contacts often require involvement with middle-level management.

Exhibit E  
Interrogatory Nos. 1(c) and 1(f)

Exhibit E  
Interrogatory Nos. 1(c) and 1(f)

## Exhibit E

### Duties and Responsibilities CPS Operating Personnel

CPS will meet the qualification requirements of ANSI 3.1-1978 with exceptions as listed in section 1.8 of the FSAR.

#### Plant Manager

The CPS Plant Manager is responsible for overall facility operation including industrial relations, planning, coordination, and direction of the operation, maintenance, refueling, radchem and technical activities. The Plant Manager is responsible for compliance with the station's operating license, regulations, ASME code requirements, and the CPS Operational Quality Assurance Program. He is also responsible for final approval and distribution of station reports. The Plant Manager is chairman of the Facility Review Group as outlined in Section 6.5 of the Technical Specifications and is the chairman of the ALARA committee. The Plant Manager reports to the Manager of Power Production. Interfaces between the CPS Staff and offsite organizations are coordinated through the Plant Manager.

#### Assistant Plant Manager

Responsibility for day-to-day operating activities, including Maintenance, Radchem, Operations and Technical matters is assigned to the Assistant Plant Manager. He is a member of the Facility Review Group and the ALARA committee.

#### Supervisor - Plant Operations

The Supervisor - Plant Operations is responsible for daily operation of the plant, including detailed planning and scheduling of Operations activities such as tests, startups and shutdowns. He directs the development and review of required procedures, reports and documents dealing with plant operations, and is a member of the Facility Review Group.

### Assistant Supervisor - Plant Operations

The Assistant Supervisor - Plant Operations assists the Supervisor - Plant Operations, carries out duties and has responsibilities as assigned by the Supervisor - Plant Operations. The Assistant Supervisor - Plant Operations works closely with the Shift and Assistant Shift Supervisors to enhance station reliability, availability, and capacity.

### Shift Supervisor

The Shift Supervisor on duty is responsible for operating the plant in compliance with license requirements and operating the plant in compliance with license requirements and operating procedures. He is in charge of the entire plant operation and ensures that the plant is being operated in a safe and reliable manner.

### Rad Protection - Shift Supervisor

The Rad Protection - Shift Supervisor assists in the planning and development of radiation protection hardware and software systems to be used during the startup and operation of CPS. The Rad Protection - Shift Supervisor is responsible for the supervision of the operating shift rad protection personnel.

### Security Shift Supervisor

The Security Shift Supervisor coordinates work schedules and Security Force requirements for his shift. The Security Shift Supervisor is responsible for the implementation of the CPS security plan during his shift.

### Utility Supervisor

The Utility Supervisor is responsible for the general house-keeping of the Service Building and other designated areas throughout the plant and for the maintenance of the grounds and facilities external to the plant.

### Administrative Supervisor

The Administrative Supervisor has overall responsibility for supervising office, clerical, and stenographic personnel,

management of power plant budgeting/cash flow accounting, coordinating the plant's purchasing/payments program, and directing the document control/records staff.

#### Computer Specialist

The Computer Specialist provides expertise to the plant staff in the areas of software/hardware development and implementation.

#### Supervisor - Plant Services

The Supervisor - Plant Services has overall responsibility for the conduct of operations for the Administrative, Training, and Plant Protection departments.

#### Shift Technical Advisor

The Shift Technical Advisor provides advanced technical assistance to the operating shift complement during normal and abnormal operating conditions. The Shift Technical Advisor reviews procedures, reports and other matters related to nuclear safety at CPS.

#### Assistant Shift Supervisor

The Assistant Shift Supervisor assists the Shift Supervisor in directing the operation of the plant. As assigned by the Shift Supervisor, the Assistant Shift Supervisor is responsible for ensuring that the plant is being operated in a safe and reliable manner in compliance with license requirements and operating procedures.

#### Control Room Operator

The Control Room Operator is the senior non-exempt operating position on each shift. The Control Room Operator directs the activities of the unlicensed operators (Unit Attendant and Auxiliary Operator) to assure proper operation and monitoring of plant systems and equipment.

#### Unit Attendant and Auxiliary Operator

The Unit Attendant and the Auxiliary Operator perform routine inspections and operations on equipment outside of the



main control room. Operations and inspections are performed at the direction of the Control Room Operator, Shift Supervisor or Assistant Shift Supervisor.

#### Supervisor - Technical

The Supervisor - Technical directs a staff which provides technical support for operations, refueling, maintenance and modifications. He is responsible for evaluating equipment performance data, including nuclear core performance, and preparing reports and making recommendations in these areas. The Supervisor - Technical coordinates the station planning, forecasting, and scheduling of reactor core nuclear activities. He is a member of the Facility Review Group.

#### Supervisor - Radchem

The Supervisor - Radchem is responsible for providing, scheduling, and coordinating radiological control services as required to support station operation and maintenance activities. He directs the implementation of the program to control the acquisition, shipping and receiving of all by-product, source, and special nuclear material except fuel. The Supervisor - Radchem is responsible for the operational chemistry program of the station and the operation of radwaste handling facilities. He is a member of the Facility Review Group and the ALARA Committee.

#### Supervisor - Training

The Supervisor - Training is responsible for the development and implementation of Clinton Power Station training programs. He directs a staff which supports the conduct of all CPS training. The Supervisor - Training is responsible for the selection of vendors who provide training to CPS personnel.

#### Supervisor - Radiation Protection

The Supervisor - Radiation Protection is responsible for the planning and development of radiation protection hardware and software systems to be used during the startup and operation of CPS. He coordinates and directs the activities of the Radiation Protection Group to support the operation of CPS.

#### Supervisor - Chemistry

The Supervisor - Chemistry is responsible for the planning and development of hardware and software systems for chemical and radiochemical processes and laboratory facilities to be used during the startup and operation of CPS. He coordinates the activities of the Chemistry Staff to support the operation of CPS.

#### Supervisor - Mechanical

The Supervisor - Mechanical is responsible for the planning, development, and implementation of mechanical maintenance programs to be used during the startup and operation of CPS.

#### Supervisor - Electrical

The Supervisor - Electrical is responsible for the planning, development, and implementation of all electrical maintenance programs and activities during the startup and operation of CPS.

#### Supervisor - Controls & Instrumentation

The Supervisor - Controls & Instrumentation is responsible for the planning, development, and implementation of all controls, and instrumentation maintenance programs and activities during the startup and operation of CPS.

#### Supervisor - Radwaste

The Supervisor - Radwaste is responsible for the planning and development of radwaste equipment and software systems to be used during the startup and operation of CPS. The Supervisor - Radwaste directs the activities of the Radwaste Group to support the operation of CPS.

#### Control Room Supervisor

The Control Room Supervisor is responsible for adherence to the operational requirements prescribed in the Technical Specifications. The Control Room Supervisor develops software documentation and coordinates the Main Control Room activities to support the startup and operation of CPS.

#### Assistant Supervisor - Controls & Instrumentation

The Assistant Supervisor - Control & Instrumentation provides assistance in the supervision of planning and development of discipline maintenance programs to be used during the startup and operation of CPS.

#### Assistant Supervisor - Mechanical

The Assistant Supervisor - Mechanical provides assistance in the supervision of planning and development of discipline maintenance programs to be used during the startup and operation of CPS.

#### Assistant Supervisor - Electrical

The Assistant Supervisor - Electrical provides assistance in the supervision of planning and development of discipline maintenance programs to be used during the startup and operation of CPS.

#### Chemist Nuclear

The Chemist - Nuclear is responsible for the supervision of the day-to-day activities of the chemistry staff to support the startup and operation of CPS. The Chemist - Nuclear provides assistance in the planning and development of hardware and software systems required by the chemistry staff to support CPS startup and operation.

#### Radchem Engineer

The Radchem Engineer assists in the planning and development of Radchem Department hardware and system design and modification during the startup and operation of CPS.

#### Compliance Analyst

The Compliance Analyst assists in the preparation of Quality Assurance implementation procedures for CPS Operations and Startup organizations. The Compliance Analyst performs and analyzes internal reviews for activities associated with the implementation of the Operational Quality Assurance Program.

#### Technical Analyst - Rad Protection

The Technical Analyst - Rad Protection assists in the planning and development of a dosimetry program and records keeping to be used during the startup and operation of CPS.

#### Results Engineer

The Results Engineer provides technical and operational assistance to the CPS staff in the conduct of tests and operations.

#### Mechanical Engineer

The Mechanical Engineer provides technical guidance and evaluation relative to mechanical maintenance programs and activities. He develops maintenance programs to support the startup and operation of CPS.

#### Nuclear Engineer

The Nuclear Engineer provides technical and operational guidance in reactor engineering and fuel management for CPS.

#### Technical Analyst - Maintenance

The Technical Analyst - Maintenance assists in the organization, preparation, and maintenance of maintenance records and documentation.

#### Electrical Engineer

The Electrical Engineer assists in the planning and implementation of C & I maintenance programs. The Electrical Engineer recommends design changes to station systems, equipment, and components where necessary to improve operation and/or maintainability or otherwise increase utilization.

#### Training Instructor

The Training Instructor prepares and conducts training programs for the CPS staff. The Training Instructor is

responsible for maintaining records of all training conducted for CPS personnel.

#### Maintenance Inspector

The Maintenance Inspector plans, conducts, evaluates, and reports on the results of non-destructive examinations performed on station equipment. The Maintenance Inspector reviews material requisitions for spare parts, materials, or components to ensure proper quality control requirements are enforced.

#### Maintenance Planner

The Maintenance Planner develops and implements maintenance planning and scheduling programs to be used during the startup and operation of CPS.

#### Technical Specialist

The Technical Specialist provides technical and operational assistance to the CPS staff in the conduct of tests and operational assistance to the CPS staff in the conduct of tests and operations. The Technical Specialist supervises the development of radiological and other environmental programs.

#### Compliance Supervisor

The Compliance Supervisor prepares the QA implementation procedures for the CPS operations and startup organizations. The Compliance Supervisor performs internal reviews and inspections, vendor surveillance, fire protection inspections, and safety investigations.

#### Records Supervisor

The Records Supervisor has overall responsibility for development and implementation of the Records Management System and supervision of construction Records Management personnel.



### Supervisor - Results

The Supervisor - Results provides operational assistance to the CPS staff in the conduct of tests and operations. The Supervisor - Results is responsible for the development of the CPS performance test program and for the supervisor of the results engineers.

### Stores Supervisor

The Stores Supervisor is responsible for the planning, development and operation of storeroom programs and procedures for use during construction, startup, and operation of CPS.

### Supervisor - Nuclear

The Supervisor - Nuclear is responsible for the development of programs and procedures to optimize fuel management at CPS. The Supervisor - Nuclear directs the activities of the CPS nuclear engineers.

### Supervisor - Plant Protection

The Supervisor - Plant Protection has overall responsibility for implementation and execution of the CPS Security and Contingency Plan.

### Electrician

The General Repairman Electrician conducts preventive and corrective maintenance on station electrical generation and equipment, distribution systems, and various control systems. He assists in the writing of procedures which support electrical activities and documents work results as required.

### Radiation and Chemical Technician

The Radiation and Chemical Technician performs required radiological surveys utilizing various types of portable survey instrumentation. The Radiation and Chemical Technician operates and calibrates as required other radioanalytical equipment. He performs sampling and analysis of various



process systems which requires the use of laboratory analytical instrumentation.

#### Radwaste Operations Control Operator

The Radwaste Operations Control Operator is responsible for startup, operation, system operational adjustments, and shutdown of radwaste systems controlled from the Radwaste Operations Center.

#### Radwaste Operator

The Radwaste Operator is responsible for the startup, inspection, adjustment, and shutdown of radwaste systems from outside the Radwaste Operations Center. The Radwaste Operator makes minor repairs, such as repairing small water/steam leaks, lubricating machinery, and changing filters in radwaste systems.

#### Control and Instrument Foreman

The Control and Instrument Foreman conducts preventive and corrective maintenance activities on station instrumentation control systems, computers, and measuring and test equipment. He writes procedures in support of C&I activities, coordinates work assignments, and reviews work requests and documentation of completed work packages.

#### Control and Instrument Man

The General Repairman - Control and Instrument conducts preventative and corrective maintenance on station instrumentation, control systems, computers, and measuring and test equipment. He assists in the writing of procedures which support C&I activities and documents work requests as required.

#### Electrical Maintenance Foreman

The Electrical Maintenance Foreman conducts preventive and corrective maintenance activities on station electrical generation equipment, distribution systems, and various control systems. He writes procedures in support of electrical activities, coordinates work assignments, and reviews work requests and documentation of completed work packages.

#### General Repairman - Certified Welder

The Certified Welder is responsible for performing welding operations on plant components and for providing documentation and certification of work results as required.

#### General Repairman/Machinist

The General Repairman conducts preventive and corrective maintenance on station mechanical equipment such as pumps, valves, turbines, compressors, and air conditioning equipment. The General Repairman is responsible for the manufacturing & tooling of parts to support maintenance activities and will therefore be required to operate machinery equipment such as lathes and drilling equipment.

#### Mechanical Foreman

The Mechanical Foreman conducts preventive and corrective maintenance on station mechanical equipment such as pumps, valves, turbines, compressors, and air conditioning equipment. He writes procedures in support of mechanical activities, coordinates work assignments, and reviews work requests and documentation of completed work packages.

#### Secretary

The Secretary reports directly to the Plant Manager and is responsible for various administrative functions such as: personnel testing, payroll distribution, travel arrangements, notepad & log, and maintenance of procedure manuals.

#### Storehousemen

The Storehousemen are responsible for the procurement and receiving of parts, equipment, materials, supplies and services to support the startup and operation of CPS.

Exhibit F  
Interrogatory Nos. 1(c) and 1(f)

ILLINOIS POWER COMPANY  
POSITION DESCRIPTION  
SUPERVISORY, ADMINISTRATIVE AND PROFESSIONAL POSITIONS

POSITION TITLE: Supervisor - Plant Operations Quality Assurance  
DEPARTMENT: Quality Assurance  
POSITION CODE: 931  
LOCATION: Clinton Power Station  
REPORTING TO: Director-Quality Assurance  
DATE: October 1980

RESPONSIBILITIES:

Provide direction and supervision of the Clinton Power Station - Plant Operations Quality Assurance staff in verifying adherence to the Operational Quality Assurance Program.

DUTIES:

1. Develop and prepare procedures and instructions to Plant Operations-QA staff for the performance of Quality Assurance activities such as reviews, surveillance, and audits of CPS Plant organization's activities.
2. Participate in the general Quality Assurance activities during the initial turnover, checkout, and test of power plant equipment and systems and in the subsequent pre-operational testing, startup, operation, maintenance, modification, and refueling of CPS.
3. Review and approve audit plans for selected activities.
4. Assign surveillance activities to Plant Operations-QA staff personnel.
5. Review CPS Plant organization's audit responses and verify implementation of corrective action measures.
6. Prepare Quality Assurance inputs to commitment documents, i.e., Safety Analysis Report Amendments, Inspection and Enforcement Bulletins, etc.
7. Develop training programs for Plant Operations-QA personnel to meet the qualification requirements, to maintain proficiency, and to expand their level of expertise.
8. Provide supervisory and technical direction to the Plant Operations-QA personnel to guide them in the performance of their duties.

Supervisor - Plant Operations Quality Assurance (continued)

9. Maintain coordination with the CPS Power Plant Manager, keeping him informed of noted activities related to quality or the safe operation of the plant.
10. Act as primary contact/interface with Nuclear Regulatory Commission inspections during plant inspections.
11. Maintain qualifications to act as a Lead Auditor for internal and external audits.

Illinois Power Company  
POSITION DESCRIPTION SUPPLEMENT  
SUPERVISORY, ADMINISTRATIVE, AND PROFESSIONAL POSITIONS

Position Title: Supervisor-Plant Operations Quality Assurance  
Department: Quality Assurance

Position Code: 931  
Date: October 1980

FACTOR	SUBSTANTIATING INFORMATION
I. KNOWLEDGE AND EXPERIENCE	Engineering degree preferred but substantial noncollegiate technical education and experience will suffice. Six (6) or more years' experience in the field of quality assurance, preferably at an operating nuclear plant or with operations supervisory experience. At least one year of this experience shall be obtained within the quality assurance organization of IP.
II. ORIGINAL THINKING	Requires significant original thinking to devise audit and surveillance plans, to recommend and evaluate corrective action for noted deficiencies, and to anticipate and prevent quality problems. Also requires extensive ingenuity and imagination to devise practices consistent with the many diverse subtleties of the Federal Regulations, codes, standards, and other requirements applicable to CPS operation.
III. POLICIES, PLANS, AND PROGRAMS	Major source of development for procedures, programs, policies; originates the Plant Operations-QA program; is the principal advisor to the Director-QA on the Operational QA program and policies; advises the Plant Manager on QA/QC programs and policies. These requirements apply frequently to the working interpretations of the FSAR and many other commitments which form the basis for authorized operation of CPS.
IV. ADMINISTRATIVE DIRECTION AND COORDINATION OF PEOPLE	Supervision and daily direction of eight QA Engineers, Station QA Engineers, and clerical personnel. Must be able to organize work force to obtain the required coverage of plant operational activities; responsible for performance evaluations of subordinates.
V. RESPONSIBILITY FOR DECISION MAKING	Makes significant decisions regarding Company regulatory compliance, performance of on-site contractors, etc.; may impact power production schedules, plant availability, and administrative costs.
VI. RESPONSIBILITY FOR EXTERNAL RELATIONS	Has frequent and major relations with contractors and regulatory agencies; often presents Company policy or position to these organizations. May represent Company at "trade association" meetings, etc. Contacts are an "influencing" nature.



ILLINOIS POWER COMPANY  
**POSITION DESCRIPTION**  
SUPERVISORY, ADMINISTRATIVE AND PROFESSIONAL POSITIONS

POSITION TITLE: SUPERVISOR - CONSTRUCTION  
QUALITY ASSURANCE

DEPARTMENT: Generation  
Engineering

POSITION CODE: 871

LOCATION: Project Site

REPORTING TO: Director -  
Quality Assurance

DATE: July 7, 1978

**RESPONSIBILITIES:**

Direction and supervision of the Site Quality Assurance staff in verifying adherence to the Quality Assurance Program.

**DUTIES:**

1. Prepare instructions to site QA staff for the performance of Quality Assurance activities such as audits, surveillance, audit reports, and reviews of contractor's activities.
2. Participate in the general Quality Assurance activities during the design, procurement, installation, and test of Power Plant equipment and systems.
3. Review and approve audit plans for selected activities.
4. Assign construction site surveillance activities to staff personnel.
5. Review site contractor audit responses and determine adequacy of corrective action measures.
6. Prepare Quality Assurance inputs to commitment documents, i.e., Safety Analysis Reports, Environmental Reports, and permit and license applications.
7. Develop training programs for site Quality Assurance personnel to expand their level of expertise.
8. Provide supervisory and technical direction to the site QA personnel to guide them in the performance of their duties.
9. Establish staffing requirements for the site Quality Assurance group and support the Director - Quality Assurance in meeting these requirements.

Illinois Power Company  
POSITION DESCRIPTION SUPPLEMENT  
SUPERVISORY, ADMINISTRATIVE, AND PROFESSIONAL POSITIONS

Position Title: SUPERVISOR - CONSTRUCTION QUALITY  
Department: Generation Engineering ASSURANCE

Position Code: 871  
Date: July 7, 1978

FACTOR	SUBSTANTIATING INFORMATION
I. KNOWLEDGE AND EXPERIENCE	Engineering degree preferred but substantial non-collegiate technical education and experience will suffice. <del>5 or more</del> <i>Ten</i> years experience in QA, nuclear plant design/construction/operations; supervisory experience is important. <i>8/10</i>
II. ORIGINAL THINKING	Requires significant original thinking to devise surveillance plans, corrective action for noted deficiencies, to anticipate and prevent site quality problems.
III. POLICIES, PLANS, AND PROGRAMS	Major inputter to procedures, programs, policies; originates site QA program; a principal advisor on site construction control programs.
IV. ADMINISTRATIVE DIRECTION AND COORDINATION OF PEOPLE	Supervision and daily direction of 2-8 Engineers (QA), QA Engineers, and Station Quality Assurance Engineers. Must be able to organize work force to obtain required coverage of site activities; responsible for performance evaluation of subordinates.
V. RESPONSIBILITY FOR DECISION MAKING	Makes significant decisions regarding company regulatory compliance, contractor performance, etc. may impact project schedule and administrative costs.
VI. RESPONSIBILITY FOR EXTERNAL RELATIONS	Has frequent and major interface with construction contractors and regulating agencies; often presents company policy or position to these organizations. May represent company at "trade association" meetings, etc. Contacts are of an "influencing" nature.

ILLINOIS POWER COMPANY  
**POSITION DESCRIPTION**  
SUPERVISORY, ADMINISTRATIVE AND PROFESSIONAL POSITIONS

POSITION TITLE: STATION QUALITY ASSURANCE  
ENGINEER

DEPARTMENT: Generation  
Engineering

POSITION CODE: 336

LOCATION: Decatur Headquarters  
or Project Site

REPORTING TO: Supervisor - Construction  
Quality Assurance

DATE: April 9, 1979

**RESPONSIBILITIES:**

Ensure that corporate and contractor activities are conducted in compliance with the IP QA Program.

**DUTIES:**

1. Organize and direct the technical activities of staff engineers and clerical personnel.
2. Prepare and/or review instructions for the performance of Quality Assurance activities such as audits, surveillance, audit reports, and compliance evaluations.
3. Participate in general quality assurance activities during the design, procurement, installation, and test of power plant equipment and systems.
4. Develop or approve audit plans for critical activities. Lead QA audits or participate in audits as a team member.
5. Evaluate adequacy of audit responses in solving quality problems; recommend corrective action measures to serious quality problems.
6. Perform surveillance of activities for conformance with established quality requirements.
7. Prepare quality assurance inputs to federal commitment documents, i.e., Safety Analysis Reports, Environmental Reports, and permit/license applications.
8. Determine proper quality requirements for procurement documents.
9. Represent the Company to the U.S. Nuclear Regulatory Commission inspectors, demonstrating IP's compliance to regulatory commitments.

Illinois Power Company  
POSITION DESCRIPTION SUPPLEMENT  
SUPERVISORY, ADMINISTRATIVE, AND PROFESSIONAL POSITIONS

Position Title: STATION QUALITY ASSURANCE ENGINEER  
Department: Generation Engineering

Position Code: 336  
Date: April 9, 1979

FACTOR	SUBSTANTIATING INFORMATION
I. KNOWLEDGE AND EXPERIENCE	<p>A. Education-Eng'rg. degree preferred but substantial non-collegiate technical education is acceptable.</p> <p>B. Experience</p> <ol style="list-style-type: none"> <li>1) eight or more years combination of nuclear work, QA, or power plant engineering/construction/operation;</li> <li>2) Expertise in federal regulations &amp; national or industry codes/standards;</li> <li>3) Significant leadership experience;</li> <li>4) Thorough grasp of utility business.</li> </ol> <p style="text-align: right;">C. (cont)</p>
II. ORIGINAL THINKING	<p>Examples of need for creativeness and resourcefulness:</p> <ol style="list-style-type: none"> <li>1) Devise plans and procedures for auditing, surveillances, and program evaluations;</li> <li>2) suggest solutions to complex quality problems;</li> <li>3) develop solutions to management problems involving multi-department or company interfaces;</li> <li>4) project positive aspects of Company accomplishments when confronted with external critics.</li> </ol>
III. POLICIES, PLANS, AND PROGRAMS	<ol style="list-style-type: none"> <li>1) Prepare and review policies and plans which generally effect one or more LP departments.</li> <li>2) Develop programs for comprehensive monitoring of power plant construction/operation.</li> <li>3) Authoritatively interpret Company QA program and policy.</li> <li>4) Prepare department procedures.</li> </ol>
IV. ADMINISTRATIVE DIRECTION AND COORDINATION OF PEOPLE	<ol style="list-style-type: none"> <li>1) Direct or coordinate activities of staff QA Engineers on either a part-time or full-time basis;</li> <li>2) Coordinate problem solving task groups composed of company, consultants, &amp; contractor personnel;</li> <li>3) Coordinate multiorganization activities in responding to outside agency inspections.</li> <li>4) Direct the QA emphasis of contractor or consultant personnel.</li> <li>5) Moderate organizing, directing, &amp; evaluating.</li> <li>6) Lead audit teams composed of Company &amp; non-Company personnel.</li> </ol>
V. RESPONSIBILITY FOR DECISION MAKING	<ol style="list-style-type: none"> <li>1) Determine adequacy of QA programs and corrective action commitments.</li> <li>2) Determine approach to responding to NRC inspections.</li> <li>3) Substantial independence expected.</li> <li>4) Decisions can impact costs and schedule.</li> </ol>
VI. RESPONSIBILITY FOR EXTERNAL RELATIONS	<ol style="list-style-type: none"> <li>1) Has significant and frequent external contacts with designer, regulatory agencies, contractors, and other utilities in auditing, developing corrective action, or establishing IP QA program elements.</li> <li>2) Representation of Company to federal inspectors is extremely vital to trouble-free construction/operation of reactor plants.</li> <li>3) Contacts with designer/constructor important to economical and licensable nuclear power stations.</li> </ol>

ILLINOIS POWER COMPANY  
POSITION DESCRIPTION  
SUPERVISORY, ADMINISTRATIVE AND PROFESSIONAL POSITIONS

POSITION TITLE: Quality Assurance Engineer DEPARTMENT: Generation Engineering

POSITION CODE: 325

LOCATION: Decatur Headquarters  
or Project Site

REPORTING TO: Supervisor - Construction  
Quality Assurance; Director -  
Quality Assurance

DATE: April 9, 1979

RESPONSIBILITIES:

Perform audit, surveillance, and QA program evaluations to verify that corporate and contractor activities are conducted in accordance with the IP QA program.

DUTIES:

1. Provide technical guidance/supervision for Engineer-QA and clerical personnel.
2. Prepare for and perform quality assurance activities during the design, procurement, installation, and test of power plant equipment and systems such as audits, surveillance, preparation of audit reports, and program evaluations.
3. Schedule audits and related functions.
4. Develop audit plans for critical activities. Participate in audits as a team member or team leader.
5. Track corrective action commitments provided by audited organizations.
6. Perform surveillance of contractor and company activities to determine conformance with established quality requirements.
7. Assist in the evaluation of audit responses and preparation of corrective action recommendations.
8. Assist in the preparation of quality assurance procedures related to all phases of quality assurance and control activities.
9. Review procurement and design documents for proper quality requirements; take action to upgrade documents as necessary.
10. Assist in preparation of quality assurance inputs to Safety Analysis Reports, Environmental Reports, and permit and license reports.
11. Perform other duties as assigned.



Illinois Power Company  
POSITION DESCRIPTION SUPPLEMENT  
SUPERVISORY, ADMINISTRATIVE, AND PROFESSIONAL POSITIONS

Position Title: QUALITY ASSURANCE ENGINEER  
Department: Generation Engineering

Position Code: 325  
Date: April 9, 1979

FACTOR	SUBSTANTIATING INFORMATION
I. KNOWLEDGE AND EXPERIENCE	<p>A. Education-Technical degree preferred, but substantial non-collegiate technical education and experience will suffice.</p> <p>B. Experience -</p> <ol style="list-style-type: none"> <li>1) 4 or more yrs. in QA, nuclear work, or power plant engineering/construction/operations;</li> <li>2) understanding of and ability to use federal regulations and national or industry codes/standards;</li> <li>3) some leadership experience; (cont)</li> </ol>
II. ORIGINAL THINKING	<p>Examples of need for creativeness and resourcefulness:</p> <ol style="list-style-type: none"> <li>1) develop specific audit and surveillance plans;</li> <li>2) initiate section and department procedures;</li> <li>3) analyze and solve complex quality problems.</li> </ol>
III. POLICIES, PLANS, AND PROGRAMS	<ol style="list-style-type: none"> <li>1) Provide input to procedures, plans and policy statements which generally are departmental in scope, but sometimes multi-departmental.</li> <li>2) Maintain audit programs to assure proper coverage of power plant construction/operation.</li> <li>3) Develop and recommend plans for improved company compliance with regulatory commitments.</li> </ol>
IV. ADMINISTRATIVE DIRECTION AND COORDINATION OF PEOPLE	<ol style="list-style-type: none"> <li>1) Direct the activities of other engineers in the course of auditing, shop visits, etc.</li> <li>2) Technical supervision of clerical personnel.</li> <li>3) Coordinate technical specification reviews with other Company and consultant engineers.</li> <li>4) Some organizing, directing, and evaluating.</li> </ol>
V. RESPONSIBILITY FOR DECISION MAKING	<ol style="list-style-type: none"> <li>1) Determine adequacy of QA program provisions and corrective action measures.</li> <li>2) Determine adequacy of quality requirements in design and procurement documents.</li> <li>3) Some decisions subject to supervisory review.</li> </ol>
VI. RESPONSIBILITY FOR EXTERNAL RELATIONS	<ol style="list-style-type: none"> <li>1) Frequent (often daily) contact with contractors, NRC, or other utilities in the course of audits or developing quality control plans.</li> <li>2) Interface is at working or supervisory level.</li> <li>3) Representation of company to federal inspectors is vital to trouble-free construction/operation of nuclear plants.</li> </ol>



ILLINOIS POWER COMPANY  
POSITION DESCRIPTION  
SUPERVISORY, ADMINISTRATIVE AND PROFESSIONAL POSITIONS

POSITION TITLE: Engineer-Quality Assurance DEPARTMENT: Quality Assurance

POSITION CODE: 324

LOCATION: Decatur Headquarters  
or Project Site

REPORTING TO: Supervisor - Construction  
Quality Assurance; Director -  
Quality Assurance

DATE: July 7, 1978

RESPONSIBILITIES:

Assist in and/or perform quality assurance activities to ensure that activities conform to requirements of Illinois Power Company's QA program.

DUTIES:

1. Assist in the preparation for and performance of quality assurance activities such as audits, surveillance, audit reports, and QA program evaluations.
2. Participate in the general quality assurance activities during the design, procurement, installation, and test of power plant equipment and systems.
3. Assist in the development of audit plans for selected activities.
4. Participate in audits as a team member or as team leader as assigned.
5. Perform surveillance of activities for conformance with established quality requirements as assigned.
6. Assist in the evaluation of audit responses and preparation of corrective action measures as required.
7. Evaluate, or assist in the evaluation of, major aspects of quality assurance programs for conformance to established industry standards and IP QA program requirements.
8. Review procurement documents for proper quality requirements.
9. Perform other duties as assigned.

Illinois Power Company  
POSITION DESCRIPTION SUPPLEMENT  
SUPERVISORY, ADMINISTRATIVE, AND PROFESSIONAL POSITIONS

Position Title: Engineer-Quality Assurance

Position Code: 324

Department: Quality Assurance

Date: July 7, 1978

FACTOR	SUBSTANTIATING INFORMATION
I. KNOWLEDGE AND EXPERIENCE	New college graduate (preferably technical) with one year or less experience; high school graduate with 2-5 years technical education and experience.
II. ORIGINAL THINKING	Some original thinking required in development of audit plans and program evaluation checklists.
III. POLICIES, PLANS, AND PROGRAMS	Does not develop or promulgate plans and policies; evaluates same for compliance to federal regulatory commitments.
IV. ADMINISTRATIVE DIRECTION AND COORDINATION OF PEOPLE	None
V. RESPONSIBILITY FOR DECISION MAKING	Incumbent's determinations of whether QA programs and activities comply with regulations can effect future action taken by supervision. "Decisions" are minor, infrequent, and subject to supervisory review.
VI. RESPONSIBILITY FOR EXTERNAL RELATIONS	Occasional contacts with regulatory inspectors and contractors in either audited or auditing functions.

ILLINOIS POWER COMPANY  
POSITION DESCRIPTION  
SUPERVISORY, ADMINISTRATIVE AND PROFESSIONAL POSITIONS

POSITION TITLE: Supervisor-Engineering  
Quality Assurance

DEPARTMENT: Quality Assurance

POSITION CODE: 932

LOCATION: Headquarters

REPORTING TO: Director--Quality Assurance DATE: October 1980

RESPONSIBILITIES:

Direction and supervision of the Engineering Quality Assurance staff in verifying adherence to the Quality Assurance Program.

DUTIES:

1. Prepare instructions for engineering QA staff for the performance of QA activities such as audits, surveillance, audit reports, and reviews of vendors' activities.
2. Participate in the general Quality Assurance activities during the design, procurement, operation, modification, and refueling of CPS.
3. Review and approve audit plans for selected activities.
4. Coordinate vendor surveillance activities with other IP organizations.
5. Coordinate the tracking of audit responses and corrective action measures.
6. Prepare Quality Assurance inputs to commitment documents, i.e., Safety Analysis Report Amendments, Inspection and Enforcement Bulletins, etc.
7. Conduct QA training sessions for engineering, production, and operations personnel.
8. Provide supervisory and technical direction to the engineering QA personnel to guide them in the performance of their duties.
9. Develop and direct the QA activities associated with nuclear fuel.
10. Assist other internal departments in the development of QA activities such as procurement functions, environmental functions, production functions, etc.
11. Maintain qualifications to act as Lead Auditor for internal and external audits.

Illinois Power Company  
POSITION DESCRIPTION SUPPLEMENT  
SUPERVISORY, ADMINISTRATIVE, AND PROFESSIONAL POSITIONS

Position Title: Supervisor-Engineering Qual. Assurance  
Department: Quality Assurance

Position Code: 932  
Date: October 1980

FACTOR	SUBSTANTIATING INFORMATION
I. KNOWLEDGE AND EXPERIENCE	Engineering degree or science degree preferred, but substantial non-collegiate technical education and experience will suffice. Five (5) or more years' experience in nuclear design, construction, or operations; at least two of the five years should be in Quality Assurance.
II. ORIGINAL THINKING	Requires significant original thinking to devise audit and surveillance plans, to recommend and evaluate corrective action for noted deficiencies, and to anticipate and prevent quality problems. Also requires extensive ingenuity and imagination to devise practices consistent with the many diverse subtleties of the Federal Regulations, codes, standards, and other requirements applicable to the CPS operation.
III. POLICIES, PLANS, AND PROGRAMS	Major source of development for procedures, programs, policies; originates the engineering-QA program; is the principal advisor to the Director-QA on the engineering QA program and policies. The requirements apply frequently to the working interpretations of the FSAR and many other commitments which form the basis for authorized operation of CPS.
IV. ADMINISTRATIVE DIRECTION AND COORDINATION OF PEOPLE	Supervision and daily direction of four-six QA Engineers, Station QA Engineers, and clerical personnel. Must be able to organize work force to obtain the required coverage of engineering activities, responsible for performance evaluations of subordinates.
V. RESPONSIBILITY FOR DECISION MAKING	Makes significant decisions regarding Company regulatory compliance, performance of vendors, etc.; may impact design, modification, and procurement schedules.
VI. RESPONSIBILITY FOR EXTERNAL RELATIONS	Has very frequent relations with numerous vendors and contractors; often presents Company policy or position to these organizations. Is very influential in establishing acceptability of suppliers during the contract-negotiation stage. May represent Company at "trade association" meetings, etc.

ILLINOIS POWER COMPANY  
**POSITION DESCRIPTION**  
SUPERVISORY, ADMINISTRATIVE AND PROFESSIONAL POSITIONS

POSITION TITLE: Director -  
Quality Assurance

DEPARTMENT: Generation  
Engineering

POSITION CODE: 185

LOCATION: Decatur Headquarters

REPORTING TO: Manager of  
Generation Engineering

DATE: July 7, 1978

**RESPONSIBILITIES:**

Direction and supervision of the Quality Assurance staff for defining establishing, and verifying adherence to the Quality Assurance Program of Illinois Power Company.

**DUTIES:**

1. Supervise the development and periodic updating of the manual which describes the IP Quality Assurance program.
2. Approve procedures and instructions for the performance of Quality Assurance organization activities such as audits, surveillance, audit reports, and program evaluations.
3. Review and sign various departmental procedures for compliance with the applicable regulations, codes, standards, and IP QA program requirements.
4. Approve quality assurance inputs to commitment documents, i.e., Safety Analysis Reports, Environmental Reports, and permit and license applications.
5. Develop staffing requirements for the Quality Assurance Section.
6. Establish audit requirements internal and external to the Company to ensure quality assurance programs are being implemented and meet established requirements.
7. Approve audit plans.
8. Assign audit team members, team leaders, and audit scopes.
9. Assign surveillance activities to staff personnel.
10. Review and approve audit reports.
11. Recommend corrective action to noted quality problems to management.

12. Supervise the continued operation of an information system for management and staff personnel to keep them informed on changes and impending changes to Quality Assurance requirements which could affect their work.
13. Submit monthly status reports to management on the status and effectiveness of the QA program.
14. Coordinate the communications with the NRC Office of Inspection and Enforcement with respect to NRC inspections of IP's activities.
15. Provide for the training of QA staff personnel.
16. Act as primary interface with Nuclear Regulatory Commission for matters of corporate compliance.



Illinois Power Company  
POSITION DESCRIPTION SUPPLEMENT  
SUPERVISORY, ADMINISTRATIVE, AND PROFESSIONAL POSITIONS

Position Title: DIRECTOR - QUALITY ASSURANCE  
Department: Generation Engineering

Position Code: 185  
Date: July 7, 1978

FACTOR	SUBSTANTIATING INFORMATION
I. KNOWLEDGE AND EXPERIENCE	Engineering degree preferred, but substantial non-collegiate technical education and experience will suffice. 5 yrs. QA, nuclear design/construction/operations experience; experienced in supervision.
II. ORIGINAL THINKING	Significant original thinking required to establish QA program and to analyze and solve broad scope quality problems.
III. POLICIES, PLANS, AND PROGRAMS	Major developer of QA policy and program - advisor to management on adequacy of other plans, policies, programs- Actions in this regard can affect several IP departments.
IV. ADMINISTRATIVE DIRECTION AND COORDINATION OF PEOPLE	10-20 Engineers (QA), QA Engineers, Station Quality Assurance Engineers, and Supervisors-Construction Quality Assurance. High volume of organizing, directing, and evaluating.
V. RESPONSIBILITY FOR DECISION MAKING	Decisions made have substantial influence on company courses of action and regulatory compliance stature; impacts can potentially delay project or lead to excessive administrative costs.
VI. RESPONSIBILITY FOR EXTERNAL RELATIONS	Frequent and primary interface with major contractors, NRC, other utilities during audits, management meetings, trade meetings, etc.; dealings with NRC and contractors are of "influencing" nature; some negotiating.

ILLINOIS POWER COMPANY  
POSITION DESCRIPTION  
SUPERVISORY, ADMINISTRATIVE AND PROFESSIONAL POSITIONS

POSITION TITLE: Audit Coordinator

DEPARTMENT: Quality Assurance

POSITION CODE:

LOCATION: Decatur Headquarters

REPORTING TO: Director-Quality Assurance

DATE: September 9, 1980

RESPONSIBILITIES:

Individual is responsible for administration and coordination of QA Audit Program to ensure program effectiveness and responsiveness to regulatory and management requirements.

DUTIES:

1. Prepare annual audit plans and schedules; coordinate audit activities of Construction, Operations, and Engineering Quality Assurance Sections; interface with internal and external organizations in the preparation of plans and schedules.
2. Evaluate corrective action requirements and responses to QA audits; advise Company management on matters dealing with corrective action; identify appropriate action to be taken to obtain corrective action.
3. Maintain proficiency and qualifications as a lead QA auditor; conduct both internal and external audits as necessary to maintain proficiency.
4. Define and coordinate QA special surveillance activities and QA special reviews for IP management.
5. Act as a member auditor on Joint Utility Management Audit (JUMA) teams and conduct audits of other utility management organizations.
6. Prepare QA Department budgets and forecasts; administer contracts for consultants performing auditing reviews.
7. Coordinate QA departmental training; conduct QA auditor training and QA lead auditor training.
8. Generate changes for approval and maintain QA Program manuals up to date.
9. Prepare QA audit scope and assignment letters, corrective action status report for IP management, and monthly reports to IP management.
10. Coordinate distribution and revisions of QA documents and records; maintain QA reference library and CPS audit checklists; supervise clerical staff in performance of these functions.
11. Perform other duties as assigned.

Illinois Power Company  
POSITION DESCRIPTION SUPPLEMENT  
SUPERVISORY, ADMINISTRATIVE, AND PROFESSIONAL POSITIONS

Position Title: Audit Coordinator

Position Code: \_\_\_\_\_

Department: Quality Assurance

Date 9/9/80

FACTOR	SUBSTANTIATING INFORMATION
I. KNOWLEDGE AND EXPERIENCE	B.S. Degree in engineering or science preferred, but substantial non-collegiate technical education and experience will suffice. Five years or more experience in QA/nuclear plant design/construction/operations. Previous Quality Assurance experience is highly desirable in coordinating of audit functions.
II. ORIGINAL THINKING	Significant original thinking required to devise and/or evaluate audit plans and schedules and to evaluate both technically and administratively the corrective action for internal and external audits. Imagination and foresight are absolutely necessary in day-to-day interfaces with Company management and other external organizations.
III. POLICIES, PLANS, AND PROGRAMS	QA functions are primarily orientated around audits. The principal advisor to the Director-QA on audit plans, implementation, and corrective action is the Audit Coordinator. This person is essential to the audit program and coordinates all primary audit functions for the Construction/Operations/Engineering QA Sections. Over 100 audits per year will be conducted by QA which must be coordinated and scheduled.
IV. ADMINISTRATIVE DIRECTION AND COORDINATION OF PEOPLE	Will coordinate the audit functions of 10-15 QA Engineers/Specialists and QA Station Engineers/Specialists in the performance of audit duties and reports. Will assure qualification of lead auditors through training and counselling of people. Will coordinate QA audit program with IP management and external company management.
V. RESPONSIBILITY FOR DECISION MAKING	Decisions have very substantial influence on Company posture in regard to regulatory bodies. Untimely or wrong decisions could potentially delay plant licensing, hinder plant startup, or lead to excessive administrative costs.
VI. RESPONSIBILITY FOR EXTERNAL RELATIONS	Frequent and primary interface with major contractors, external organizations, NRC, and other utilities at management level. Very influential in establishing the image of IP-QA to other industry.

ILLINOIS POWER COMPANY  
**POSITION DESCRIPTION**  
SUPERVISORY, ADMINISTRATIVE AND PROFESSIONAL POSITIONS

POSITION TITLE: Special Processes Engineer/  
Level III Examiner

DEPARTMENT: Generation  
Engineering

POSITION CODE:

LOCATION: Decatur Headquarters

REPORTING TO: Director-Quality Assurance

DATE: July 7, 1980

**RESPONSIBILITIES:**

Evaluation and direction of engineering, quality assurance, and ASME code-related activities associated with special processes, qualifications, and procedures for power plant equipment and materials.

**DUTIES:**

1. Formulate, coordinate, and supervise the IP Programs for ASME Code Certification.
2. Maintain ASNT Certification as Level III Examiner.
3. Provide supervision, training, and qualification of Company personnel and procedures for performance of code-related work.
4. Coordinate code-related material surveillance and fracture toughness test programs as needed.
5. Provide technical direction in the planning for Inservice Inspection activities for fossil and nuclear generating stations.
6. Serve as utility representative on ASME nuclear certification surveys.
7. Evaluate nondestructive testing results to criteria of applicable codes, standards, regulations, and contracts and recommend repairs and/or corrective actions as required.
8. Review and recommend selection of materials for welding, chemical cleaning, heat treating, machining, and corrosion protection during design, procurement, installation, and testing activities for power plant systems and components.
9. Review, evaluate, and disseminate new and revised standards, codes, and regulations associated with special processes to affected IP organizations.
10. Maintain qualifications as team leader for Quality Assurance audits and surveillances; perform audits or surveillances as directed.
11. Perform other duties as required and assigned.

Illinois Power Company  
POSITION DESCRIPTION SUPPLEMENT  
SUPERVISORY, ADMINISTRATIVE, AND PROFESSIONAL POSITIONS

Position Title: Special Processes Engineer-Level III

Position Code: \_\_\_\_\_

Department: Generation Engineering

Date: 7/7/80

FACTOR	SUBSTANTIATING INFORMATION
I. KNOWLEDGE AND EXPERIENCE	<p>A. Bachelor of Science in Engineering or other technical discipline and at least eight years' experience in nondestructive testing (NDT) and metallurgy, welding, or related fields.</p> <p>B. Level III Examiner in NDT, certified by examination in at least three methods, one of which is either radiography or ultrasonics.</p> <p>1. Capable of:</p> <p>a. Interpreting codes, standards, regulations and (OVER)</p>
II. ORIGINAL THINKING	<p>A. Anticipate cost impacts of alternative code or regulatory requirements; select most cost effective option.</p> <p>B. Translate national code requirements into effective design criteria for ultrasonic calibration standards.</p>
III. POLICIES, PLANS, AND PROGRAMS	<p>A. Develop examination programs, such as one designed to evaluate fabricated conditions that--although code acceptable--may be potentially costly considering added time and radiation exposure in fulfilling life-of-plant examination requirements.</p> <p>B. Develop and recommend criteria for the selection of materials, processes, and NDT techniques as required by regulations.</p> <p>C. Evaluate test results, process irregularities and failure modes to determine condition severity or causes and corrective action.</p>
IV. ADMINISTRATIVE DIRECTION AND COORDINATION OF PEOPLE	<p>A. Prepare and administer training programs for the development of NDT personnel.</p> <p>B. Evaluate, examine, and certify NDT personnel.</p> <p>C. Supervise activities of up to ten NDT examiners, related to work in four NDT methods.</p> <p>D. Administer and coordinate implementation of ASME nuclear certification.</p> <p>E. Coordinate reactor vessel material surveillances and (OVER)</p>
V. RESPONSIBILITY FOR DECISION MAKING	<p>A. Review and approve selection of materials appropriate to design function, environmental conditions, maintenance requirements, inspectability, and cost.</p> <p>B. Select NDT methods and techniques appropriate for detection of process or service-related material flaws.</p> <p>These decisions directly affect the cost of design, installation, and maintenance which ultimately influence reliability and energy cost of generating facilities.</p>
VI. RESPONSIBILITY FOR EXTERNAL RELATIONS	<p>A. Direct the design work of consultants and contractors.</p> <p>B. Lead Quality Assurance Audits of vendors performing nuclear safety-related manufacturing and service activities for IP.</p> <p>C. Contact NRC, National Standards Committees, insurance agencies, and state agencies on technical regulatory matters to determine interpretations and resolve problems related to design and licensing approval of plant construction and operation.</p>



I. KNOWLEDGE AND EXPERIENCE (continued)

- specifications.
- b. Designating test methods and techniques.
- c. Determine NDT operations for which he is assigned and qualified.
- d. Evaluating results in terms of codes, standards, and specifications.
- e. Training and examining of NDT Level I and Level II personnel for certification.
- 2. Practical background in materials, processing, fabrication, and product technology to establish techniques and criteria for acceptance of materials for specific applications.
- 3. Maintain Level III certification.
- C. Welding and Metallurgy  
Capable of:
  - 1. Interpreting codes, standards, regulations, and specifications pertaining to materials selection, welding processes, heat treatment, corrosion protection, and other special processes.
  - 2. Establishing, or directing the establishment of, instructions for the qualification of welding procedures and welders, in accordance with national codes.

IV. ADMINISTRATIVE DIRECTION AND COORDINATION OF PEOPLE (continued)

program fracture toughness program.



Exhibit G  
Interrogatory Nos. 1(d) and 1(e)

Exhibit 2ORIENTATION PROGRAM

- I. Background - Individual
- II. Picture Presentation
  - A. Development Plan-Clinton
  - B. CPS-Isometric
  - C. Ultimate Heat Sink
  - D. CPS-Actual Plant
  - E. Early BWR3 & 4, Mark I
  - F. BWR 4, 5, & 6, Mark II
  - G. BWR 6, Mark III
  - H. Combine Mark I, II, and III
  - I. Clinton Versus Standard
  - J. BWR 6 - Reactor (Two Figures)
  - K. BWR 6 - Fuel Assemblies & Control Rod
  - L. Reactor - Turbine System
  - M. Turbines
- III. Review of Orientation Package
  - A. Details on Volume I
    - 1. Scope & Purpose
    - 2. Standards
      - a. IEEE
      - b. ANSI
      - c. Location
    - 3. Boiler and Pressure Vessel Code - ASME - Location - "N" Stamp
    - 4. Miscellaneous Information
      - 4.1 Old Nuclear Project Procedure
      - 4.2 S&L System - I.D. Codes
      - 4.3 Fact Sheet - Quick BWR Information
      - 4.4 Nuclear Abbreviations
    - 5. Nuclear Selected Documents
      - Edison Electric Institute-
      - 5.1 US-NRC #10CFR21, Reporting of Defects and Noncompliance
    - 6. Licensing Documents
      - 6.1 FSAR
      - 6.2 CPS-Environmental Statement
    - 7. General Electric's Document
      - 7.1 GESSAR - Standard Plant
      - 7.2 General BWR Description
      - 7.3 Engineering Documentation and Filing Index
  - B. Details on Volume II
    - 8. NSED - Procedures-Index
      - 8.1 Departmental Procedures
      - 8.2 Filing Procedures

Exhibit 2

III. Review of Orientation Package (continued)

- 9. Organization - IP-NSED
  - 9.1 Headquarters-Personnel Arrangement
- 10. Government Regulation
  - 10.1 NRC-Regulatory Guides
  - 10.2 Code of Federal Regulation
- 11. Quality Assurance
  - 11.1 CPS-Operational QA Manual
  - 11.2 QA-Record Storage
  - 11.3 QA-10CFR Part 50
- 12. Sargent & Lundy Documentation
  - 12.1 Drawing Number-Registered Drafting
  - 12.2 Outline of Procedure
  - 12.3 Project Instruction - Index
  - 12.4
  - 12.5 Design Criteria-Index
  - 12.6 Procurement Status
  - 12.7 Drawing Procedures
  - 12.8 Valve List
  - 12.9 Equipment List

Exhibit 3Typical Training for NSED Personnel

## A. Formal Education

1. Nuclear Engineering Masters Degree Program at University of IL
2. Continuing Education Units (CEU) work at Millikin and Rutgers
3. MBA Program
4. Technical Writing (CEU) - Millikin University
5. Qualification of Safety-Related Equipment for Nuclear Power Generating Stations - Drexel University
6. Piping Design and Fabrication, CEU Credits
7. Management of Low-Level Radioactive Waste - Georgia Institute of Technology

## B. Professional Society-Sponsored Seminars &amp; Training

1. IEEE Nuclear Power Symposium - CKT Breaker Seminar
2. ANS N-16 Committee "Nuclear Criticality Safety"
3. AIF Seminar Reactor Licensing and Safety
4. ASME Sections III and XI
5. AIF Workshop - Protection of Special Nuclear Materials and Facilities

## C. Nuclear Industry-Sponsored Programs

1. S&L - General Engineering
  - Power Station Topic
2. GE - Electric Logitrol Control
  - GE Documentation Workshop
  - Lightning Arrestor Seminar
  - BWR Plant Design and Fundamentals, Morris, IL
  - IGSCC Seminar - San Jose
3. Westinghouse Environmental Qualification on Nuclear Electrical and Electro-Mechanical Equipment
4. NUS - Video Tapes, bulletins, and examination
5. Bell & Howell Schools - Industrial Training Program
6. Crosby Valve Seminar
7. American Power Conference
8. Introduction to Fault Tree Analysis by Stat-A-Matrix

## D. NRC-Sponsored Programs

1. Regional Seminars
2. Probabilistic Risk Assessment for Nuclear Power Plant - Argonne National Laboratory, U.S. Department of Energy

## E. Company-Sponsored Training

1. Annual QA Seminars
2. Core Analysis Training
3. Public Utilities Report (PUR) Guide

Exhibit 3

E. Company-Sponsored Training (continued)

4. BOP and OPS Training
5. Orientation of New Employees
6. Auditor Training for Non-QA personnel
7. Nuclear training on Radiation Protection, Biological Effect of Radiation, Water Chemistry, etc.
8. Large Steam Turbine Generator
9. Piping analysis and the ASME Code

F. Supervisory and Management Training

1. Supervisory Development, Units II, III
2. Supervisory Development, Refresher Program
3. PREMIS - Management computer scheduling program

G. On-the-Job Training

1. Operating-testing at fossil fuel plant
2. Refueling Outage - E. I. Hatch Nuclear Plant
3. Zimmer - Inspection tour
4. Baldwin Power Plant maintenance outage
5. Duane Arnold - Refueling outage
6. Monticello-Refueling outage

H. Certification

1. Level III per ANSI N45.2.6
2. Professional Engineer Examination and Registration of Professional Engineer
3. Magnetic Particle Examination, Level II
4. Radiographic Examination, Level II
5. Radiation Safety for Radiographic Personnel

Exhibit H  
Interrogatory Nos. 1(d) and 1(e)



Exhibit H  
Interrogatory Nos. 1(d) and 1(e)

CPS Operations  
Exhibit H

The attached tables summarize the training provided to CPS staff members.

Table 1 describes the preoperational training of personnel with no previous training.

Table 2 describes alterations in the basic licensed operator training program that may be made for personnel with previous nuclear power plant experience. Personnel with previous nuclear power plant training or experience will be evaluated on a case-by-case basis and provided training in accordance with ANSI 3.1-1978, "Selection and Training of Nuclear Power Plant Personnel." The CPS Operator License Training Program is designed to satisfy the training requirements of an individual with no previous training or experience. Table 2 outlines the degree to which an individual with previous training or experience will participate in the program.

Table 3 provides a listing of courses included in the present Shift Technical Advisor (STA) program.

Table 4 describes the CPS training schedule for key staff positions.

The individual training programs for CPS are described in Table 5.

Table 6 describes the Specialist Training Courses.

Retraining conducted on a continuing or periodic basis is discussed in the individual sections.

TABLE 1

PREOPERATIONAL TRAINING OF PERSONNEL (NO PREVIOUS TRAINING)

	RF	BWRT	BOP	OT	OB	RX	LR	STA	ST	FB
Asst. Super of Plant Oper.	X	X	X	X	X	X	X			
Shift Supervisor*	X	X	X	X	X	X	X	X		X
Assistant Shift Supervisor*	X	X	X	X	X	X	X	X		X
Control Room Supervisor*	X	X	X	X	X	X	X			X
Control Room Operator*	X	X	X	X	X	X	X			X
Supervisor - Radiation Protection*		X	X						X	
Supervisor - Chemistry*		X	X						X	
Radchem Personnel*									X	
Maintenance Supervisory Personnel*		X	X						X	
Maintenance Personnel*									X	
Technical Personnel	X	X	X	X	X	X	X	X	X	
Shift Technical Advisor	X	X	X					X		

## Course Key:

RF - Reactor Fundamentals  
 BWRT - Boiling Water Reactor Technology  
 BOP - Balance of Plant  
 OT - BWR Operator Training  
 OB - Observation Training  
 RX - Reactor Startup Training  
 LR - License Review  
 ST - Specialist Training  
 STA - Shift Technical Advisor  
 FB - Fire Brigade

Comments

1. All personnel will receive General Employee Training and Departmental Indoctrination
2. \* - personnel to receive Respiratory Protection Training

TABLE 2

TRAINING REQUIREMENTS FOR LICENSED OPERATORS OF VARIOUS  
EXPERIENCE GROUPS

	REACTOR FUNDAMENTALS	REACTOR STARTUP	BWR TECHNOLOGY	BOP	BWR OPERATOR TRAINING	OBSERVATION TRAINING	OJT	LICENSE REVIEW
No previous experience	X	X	X	X	X	X	X	X
Nuclear Navy Operator experience			X	X	X	X	X	X
Previously licensed							X	X

TABLE 3  
INITIAL STA PROGRAM COURSES

<u>Hrs.</u>	Course	<u>Sem.</u>
1.	College Algebra	3
2.	Plane Trigonometry	2
3.	Physics* Mechanics, Fluid Mech., Wave Motion	4
4.	Math Calculus, Analytical Geometry	5
5.	Physics* Properties of Matter, Heat Sound, Light Modern Physics	4
6.	Math Calculus, Analytical Geometry	4
7.	Physics* Electricity, Magnetism	4
8.	Math Calculus of Several Variables	5
9.	Radiochemistry	3
10.	Thermodynamics of Heat Transfer	3
11.	Radiation Protection	2
12.	Math Differential Equations	3
13.	Nuclear Materials	3
14.	Nuclear Instrumentation	2
15.	Two Phase Heat Transfer	3

\*Taught by Richland Community College  
All other courses taught by the University of Illinois



TABLE 4

	Training Completed to Date				Start Preop Testing	Cold Hydro	NRC License Exam	Fuel Load	Hot License Exam
Months	42	36	30	24	18	12	6	0	3
Power Plant Manager	1	2 & 3			9				
Asst. Power Plant Manager			1,6,2&3	4 & 5	8 & 9		7 & 10		
Supervisor - Plant Operations	1 & 6	2 & 3		4 & 5	8, 9 & 11		7 & 10		
Supervisor - Technical	1 & 6	2 & 3		4 & 5	8 & 9		7 & 10		
Supervisor - Radchem		2 & 3			8 & 9				
Supervisor - Maintenance		2 & 3			8 & 9				
Supervisor - Compliance		8			9				

Time Now

- 1 - Reactor Fundamentals
- 2 - BWR Technology
- 3 - EOP
- 4 - BWR Operator Training
- 5 - Observation
- 6 - Reactor Startup

- 7 - License Review
- 8 - Specialty Training
- 9 - On-the-Job
- 10 - Operator Requalification
- 11 - Site Training

Note: Courses of a specified length have the course number enclosed by box illustrating the course duration. Courses of unspecified length do not have the course number enclosed.

TABLE 5

CLINTON POWER STATION TRAINING PROGRAMS

1. Reactor Fundamentals
2. BWR Technology
3. Balance of Plant
4. PWR Operator Training
5. Observation Training
6. Reactor Startup
7. License Review
8. Specialist Training
9. On-Site Training Program
10. Licensed Operators - Requalification Training
11. Shift Technical Advisor Training
12. Fire Brigade Training
13. General Employee Training
14. Respiratory Protection Training
15. Departmental Indoctrination Training
16. Departmental Training

1. Reactor Fundamentals

- A. The Reactor Fundamentals course is presented by vendor or CPS training instructors. The course is of five to sixteen weeks duration, dependent on the student's background and experience. It consists of lectures on the following subjects:

1. Mathematics
2. Chemistry
3. Radiation protection
4. Thermodynamics
5. Fluid mechanics
6. Electrical theory
7. Reactor physics and kinetics
8. Nuclear and process instrumentation
9. Reactor operations
10. Print reading
11. Introduction to plant systems

- B. The following positions should receive Reactor Fundamentals training unless previous training (i.e. previous nuclear plant experience, or Engineering Degree) has been received.

1. Power Plant Manager
2. Assistant Power Plant Manager
3. Supervisor - Plant Operations
4. Supervisor - Technical
5. Any position requiring a Reactor Operator or Senior Reactor Operator license

2. BWR Technology

- A. This course consists of lectures on the NSSS and related subsystems. It is five weeks in length and is presented by vendor or CPS instructors. The course is designed to be specific to the BWR-6.

- B. The following positions should receive BWR Technology training:

1. Power Plant Manager
2. Assistant Power Plant Manager
3. Supervisor Plant Operations
4. Supervisor Technical
5. Supervisor Radchem
6. Supervisor Maintenance

7. Any position requiring a Reactor Operator or Senior Reactor Operator license

3. Balance of Plant

- A. This course provides instruction on the non-NSSS systems of the plant. It is five weeks in length and is conducted by the CPS Training Department.
- B. The following positions should receive Balance of Plant training:
  1. Power Plant Manager
  2. Assistant Power Plant Manager
  3. Supervisor - Plant Operations
  4. Supervisor - Technical
  5. Supervisor - Radchem
  6. Supervisor - Maintenance
  7. Any position requiring a Reactor Operator or Senior Reactor Operator license

4. BWR Operator Training

- A. This course is conducted by vendor or CPS training instructors and will involve two phases--a classroom phase to last approximately 3 weeks, and a control room phase of approximately 9 weeks. The control room phase will be conducted at a simulator that accurately reproduces the operating characteristics of CPS and is also similar in panel design and arrangement.
- B. The following positions should receive BWR Operator training (exceptions are given in table 2 and discussed in the introduction):
  1. Assistant Power Plant Manager
  2. Supervisor Plant Operations
  3. Supervisor Technical
  4. Any position requiring a Reactor Operator or Senior Reactor Operator license

5. Observation Training

- A. This course is designed to familiarize candidates with the day-to-day routine of an operating BWR. During the cold license training, this will be taught by GE instructors at a BWR-5 if one is operational or a BWR 3/4 if a BWR-5 is not operational. Following fuel loading, all observation

training will be conducted at CPS by the CPS training staff. This training usually precedes simulator training, but may be scheduled after simulator if convenient.

- B. The following positions should receive Observation training unless previously BWR licensed (exceptions are discussed in Table 2 and the introduction):

1. Assistant Power Plant Manager
2. Supervisor - Plant Operations
3. Supervisor - Technical
4. Any position requiring a Reactor Operator or Senior Reactor Operator license.

#### 6. Reactor Startup

- A. This one week program is conducted by the University of Illinois' Reactor Lab group. During this course, each student performs at least ten reactor startups. The program is a combination of theoretical instruction and practical experience on the following subjects:

1. Reactor kinetics
2. Rod calibration
3. Health physics practices
4. Reactivity coefficient experiments
5. Core flux mapping

- B. The following positions should receive Reactor Startup training unless previously BWR licensed:

1. Supervisor - Plant operations
2. Supervisor - Technical
3. Any position requiring a Reactor Operator or Senior Reactor Operator license

#### 7. License Review

- A. Prospective license candidates will receive a four to eight week refresher course prior to the NRC exam. This course will review CPS systems, reactor theory, radiation protection, and applicable CPS procedures. The course is conducted by the CPS Training Group. All license applicants who completed simulator more than twelve months prior to fuel load shall also complete a simulator refresher course.

- B. The following positions should receive License Review training:

1. Assistant Power Plant Manager
2. Supervisor - Plant Operations
3. Supervisor - Technical
4. Any position requiring a Reactor Operator or Senior Reactor Operator license

#### 8. Specialist Training

- A. Personnel in the fields of radiation protection and radiochemistry, radwaste, nuclear physics, electrical maintenance, mechanical maintenance, and instrument maintenance receive training from manufacturers, vendors, and/or departmentally designed programs. Such courses vary in length from one day to six months. They may be composed of portions of other training programs such as portions of licensed operator training.
- B. The following positions, in addition to those listed above, should receive Speciality training:
  1. Assistant Power Plant Manager
  2. Supervisor - Plant Operations
  3. Supervisor - Technical
  4. Supervisor - Radchem
  5. Supervisor - Maintenance
  6. Supervisor - Compliance
- C. The programs available in each department are listed under section 16 "Departmental Training". Table 5 includes a partial list of specialist training.
- D. Specialist Refresher Training
  1. Specialist Refresher Training is conducted by the respective departments on a periodic basis to ensure minimum qualifications for all personnel.

#### 9. On-Site Training Program

1. The on-site training during the preoperational period consists of on-the-job training (OJT) for all station personnel while conducting preoperational and startup testing. This OJT is usually of an informal nature and conducted as the need arises. OJT conducted in a formal manner will be documented in the same manner as classroom training. Selected non-licensed individuals



will also receive portions of the classes described in Subsection 13.2.1.1. Table 13.2-1 outlines the courses provided to the various functional positions on the staff.

10. Licensed Operators - Requalification Training

A. Formal Training

1. The plant training staff will conduct a formal training program which consists of preplanned lectures on a regular and continuing basis. The scope and depth of the material presented shall be determined from the results of an annually administered examination and will implement the requirements of Appendix A of 10CFR55.
2. Each licensee will participate in a simulator training program of approximately three days in length every two years. This training may be used to satisfy the appropriate portions of the formal retraining requirements.

B. The following positions should receive Operator Requalification training:

1. Assistant Power Plant Manager
2. Supervisor - Plant Operations
3. Supervisor - Technical
4. Any position requiring a Reactor Operator or Senior Reactor Operator license

11. Shift Technical Advisor Training

- A. Persons designated to carry out the responsibilities of Shift Technical Advisor will complete a series of college credit courses in mathematics, physics, thermodynamics, heat transfer, and nuclear engineering. These will be augmented by CPS plant-specific training where necessary.

The STA program will be taught by the University of Illinois College of Engineering via an electronic blackboard installed on site. Some basic courses will be taught by Richland Community College on site, and non-credit plant-specific courses will be taught by CPS training staff instructors. TABLE 3 LISTS THE SPECIFIC COURSES TO BE TAUGHT BY THE UNIVERSITY OF ILLINOIS AND

RICHLAND COMMUNITY COLLEGE FOR THE INITIAL COURSE.

B. There are 20 people in the operations and training departments who have been chosen to participate in the STA program.

C. Shift Technical Advisor Refresher Training

Shift Technical Advisors will participate in the operator regualification training program.

12. Fire Brigade Training

A. Fire Brigade Training is conducted by the CPS Training Department or a vendor for fire brigade members and members of the fire protection staff. The training will vary in length from two to five days.

B. The following positions should receive Fire Brigade training:

1. Operations Department on shift personnel
2. Training Staff
3. Fire Protection Staff
4. Any person chosen as a backup brigade member

C. Fire Brigade Refresher Training

Fire brigade members shall participate in four refresher training sessions a year. The content of these sessions will be established such that a session will not be repeated for at least two years.

Practice sessions will be held on extinguishing various types of fires. These actices will utilize actual fires and the fire brigade members to use protective equipment. These sessions will be held at a minimum frequency of once per year.

Each fire brigade will participate in quarterly drills. These drills will incorporate the simulated use of equipment and follow the station fire plan when possible. At least one drill per year will be unannounced and will be utilized for all station employees. If possible, this drill will include participation by off-site fire departments.

### 13. General Employee Training

- A. General Employee Training is administered by the CPS Training Department to all personnel regularly and temporarily employed at CPS. It is a one or two day course and consists of the following subjects:
1. Introduction to CPS
  2. Emergency plan
  3. Security plan
  4. Fire protection
  5. Radiation protection and respirator training
  6. Industrial safety
  7. Quality Assurance program
- B. A written or oral examination may be administered following the lectures. Temporary personnel will participate in this training to a level commensurate with their responsibilities. In addition to the fire protection portion of General Employee Training, personnel responsible for inspection of fire protection equipment will receive additional instruction on design, inspection, and maintenance of fire suppression and extinguishing systems.
- C. General Employee Refresher Training
- Refresher Training is conducted annually for all station employees. As a minimum it will cover the following subjects:
1. Fire protection
  2. Security plan
  3. Emergency plan
  4. Radiation protection

### 14. Respiratory Protection Training

Training shall be given to all individuals who will perform work requiring respiratory protection, individuals supervising work requiring respiratory protection and individuals required to wear respiratory protection devices in an emergency situation.

### 15. Departmental Indoctrination

- A. Training is conducted by each CPS department. It normally consists of but is not limited to the following subjects:

1. Department Organization and Function
2. Individual's Job Duties and Responsibilities
3. Departmental Training Program
4. Introduction to Members of Department
5. Plant Tour

B. Departmental training should be given to all members of the CPS staff.

## 16. Departmental Training

### A. Technical Department

1. The Supervisor - Technical is responsible for Technical Departmental Training. The program will vary greatly due to the expected educational diversity of the members of the department. Technical Departmental training will normally consist of, but is not limited to, the following subjects:
  - a. Applicable codes, standards, and regulations
  - b. Environmental monitoring
  - c. Procurement
  - d. CPS Operational Quality Assurance Program
  - e. Nuclear Engineering on the job training
  - f. Results Engineer on the job training
2. Selected Technical Department Engineers will obtain and maintain a Senior Reactor Operator license.
3. Specialists should attend classroom training for the BWR and BOP systems portion of license training, as a minimum.
4. Certain Individuals may be selected to participate in courses listed below. An outline of the courses is provided in Table 5.
  - a. Station Nuclear Engineering
  - b. Station Nuclear Engineering Refresher
  - c. Core Analysis
  - d. PCTOMR Orientation
  - e. Core Management Engineering

### B. Operations Department

1. The Supervisor - Plant Operations is responsible for Nonlicensed Operator Training.

16.

B. (continued)

In addition to this program nonlicensed operators will periodically attend portions of the Licensed Operator Regualification Training. Nonlicensed Operator Training will normally consist of, but is not limited to, the following subjects:

- a. CPS systems
  - b. Shift routines
  - c. Portions of Technical Specifications
  - d. System/Plant Operating Procedures
2. Certain individuals may be selected to participate in courses listed below. An outline of the courses is provided in Table 5.
- a. BWR Refueling Floor Activity
  - b. Large Steam Turbine Generator
  - c. Limitorque Valves

Maintenance Department

The Supervisor - Maintenance is responsible for Maintenance Departmental Training. Maintenance Departmental Training is subdivided into Mechanical Maintenance Training and Electrical Control and Instrumentation Training.

C. Mechanical Maintenance

1. Mechanical Maintenance Training may normally consist of, but is not limited to, the following subjects:
- a. Operation of station vehicles and equipment
  - b. Rigging theory
  - c. Welder training and qualification
  - d. Basic machine shop practices
  - e. Pump and valve maintenance
  - f. Lubrication
  - g. Preventive maintenance
  - h. In-service inspection
  - i. Maintenance Work Requests

16.

C. (continued)

2. Certain individuals may be selected to participate in courses listed below. An outline of the courses is provided in Table 5.
  - a. Large Steam Turbine Generator Course
  - b. Limitorque Valves Course
  - c. Bearing Course
  - d. CRD Maintenance
  - e. MSIV Maintenance
  - f. BWR Refueling Floor Activity
3. All personnel have attended a CPS NSSS and BOP course taught by the CPS training staff.

D. Electrical Control and Instrumentation

1. Electrical Control and Instrumentation Training may normally consist of, but is not limited to, the following subjects:
  - a. Station electrical distribution
  - b. Breaker and battery theory, operation, and maintenance
  - c. Nuclear detector theory, operation, and maintenance
  - d. Controller theory, operation, and maintenance
  - e. Relay theory, operation, and maintenance
  - f. Process instrumentation
  - g. Preventive maintenance
  - h. In-service inspection
  - i. Computer hardware maintenance
  - j. Maintenance Work Requests
2. Certain individuals may be selected to participate in courses listed below. An outline of the courses is provided in Table 5.
  - a. Process Instrumentation Course
  - b. Nuclear Instrumentation course
  - c. Large Steam Turbine Generator course
  - d. Bearing course
  - e. Analog and Digital Electronics course
  - f. Alterrex
  - g. Rod Control and Information
  - h. Mark II EHC Introduction
  - i. Mark II EHC Technician
  - j. Electronics Correspondence



16.

D. (continued)

RadChem Department

The Supervisor - RadChem is responsible for RadChem Departmental Training. RadChem Departmental Training consists of Radiation Protection Group (RPG) Training, Chemistry Group Training, and Radwaste Group Training.

E. Radiation Protection Group

1. RPG Training may normally consist of, but is not limited to, the following subjects:
  - a. RP Standards
  - b. Shielding
  - c. Radiological survey techniques
  - d. Radioactive materials shipment and receipt
  - e. Decontamination techniques
  - f. Radiation accidents
  - g. Timekeeping techniques
  - h. ALARA
  - i. Radiation Work Permit
2. Certain individuals may be selected to participate in courses listed below. An outline of the courses is provided in Table 5.
  - a. Plant Outages

F. Chemistry Group

1. Chemistry Group Training may normally consist of, but is not limited to, the following subjects:
  - a. BWR plant chemistry
  - b. Radiochemistry and chemistry procedures
  - c. Counting room and laboratory instruments and procedures
  - d. Sampling techniques
2. Certain individuals may be selected to participate in courses listed below. An outline of the courses is provided in Table 5.
  - a. BWR Chemistry
  - b. Plant Outages

16. (continued)

G. Radwaste Group

1. Radwaste Group Training may normally consist of, but is not limited to, the following subjects:
  - a. Liquid and solid radwaste systems
  - b. Pump and valve theory
  - c. Radioactive materials shipment and receipt
  - d. Water management
2. Certain individuals may be selected to participate in courses listed below. An outline of the courses is provided in Table 5.
  - a. Plant outages

H. Security Department

The Supervisor - Security is responsible for Security Departmental Training. It will normally consist of, but is not limited to, the following areas:

- a. Training manual basic training
- b. Training manual advanced training
- c. Weapons training, qualification, and requalification
- d. CPS Security, Emergency, and Fire Plans

I. Compliance Department

The Supervisor - Compliance is responsible for Compliance Departmental Training. Compliance Departmental Training normally consists of, but is not limited to, the following subjects:

- a. CPS Operational Quality Assurance Program
- b. CPS procedures
- c. Inspection techniques
- d. Applicable codes, standards, and regulations

J. Departmental Retraining

Departmental retraining should be conducted as determined by the department head. The purpose of this training is to maintain the employee's competence in his particular job as well as to increase his overall knowledge level.

TABLE 6  
SPECIALIST TRAINING COURSES

1.    ALTERREX  
  
A practical course to familiarize maintenance staff with the design, operational, and maintenance features of a large generator excitation system.  
  
Conducted by General Electric       3-1/2 days
2.    STATION NUCLEAR ENGINEERING  
  
Course consists of many nuclear engineering subjects which relate to the functions of the nuclear engineer prior to startup, through the startup test program during power operation and outages.  
  
Conducted by General Electric       5 weeks
3.    STATION NUCLEAR ENGINEERING REFRESHER  
  
Course consists of a review and update of topics such as reactor physics, thermal hydraulics, shutdown margin and reactivity monitoring, core thermal limits, LPRM and control blade lifetime determination and process computer programs.  
  
Conducted by General Electric       10 days
4.    PCIOMR ORIENTATION  
  
Course presents recommended reactor maneuvers to optimize BWR core performance and minimize PCIOMR-induced capacity factor loss. Corresponding reactor engineering techniques, including use of nuclear instrumentation and process computer programs, are explained.  
  
Conducted by General Electric       1 day
5.    CORE MANAGEMENT ENGINEERING  
  
Course consists of lectures and studies on BWR behavior, thermal hydraulics, core management principles, fuel cycles, core performance monitoring and safety and licensing.  
  
Conducted by General Electric       3 weeks

6. BWR CHEMISTRY

Students receive instruction and practical experience to enable them to complete both radiochemical and chemical analysis. It also covers material on how to comply with and interpret the chemical and radiochemical aspects of the technical specifications and plant warranties.

Conducted by General Electric 12 weeks

7. NUCLEAR INSTRUMENTATION

To train technicians and supervisors who are responsible for the maintenance and testing of BWR nuclear and process radiation monitoring systems.

Conducted by General Electric 5 weeks

8. ROD CONTROL AND INFORMATION SYSTEM

To train technicians and supervisors responsible for the maintenance and testing of the reactor control rod manual control system.

Conducted by General Electric 7 weeks

9. PROCESS INSTRUMENTATION AND CONTROL

To train technicians and responsible supervisors in the theory and application of process instrumentation and control systems commonly used in the BWR nuclear steam supply system.

Conducted by General Electric 4 weeks

10. CRD MAINTENANCE

To provide comprehensive courses of instruction in all aspects of control rod drive (CRD) and hydraulic control unit (HCU) maintenance including CRD removal, installation, rebuilding and leak testing and HCU preventive and corrective maintenance.

Conducted by General Electric 5 days

11. MSIV MAINTENANCE

To provide a comprehensive course of instruction for mechanics and maintenance supervisors in the techniques of maintenance for a main steam isolation valve (MSIV).

Conducted by General Electric      5 days

12. BWR REFUELING FLOOR ACTIVITY

To provide comprehensive training to maintenance and operations personnel in those activities normally performed in the refueling of a BWR during a typical outage.

Conducted by General Electric      3 weeks

13. MARK II EHC INTRODUCTION

A basic orientation on the overall capabilities, features, and operation of the Mark II Electrohydraulic Control System.

Conducted by General Electric      3 days

14. MARK II EHC TECHNICIAN

Provides background knowledge and system familiarity necessary to perform basic troubleshooting and routine maintenance on the Electrohydraulic Control System.

Conducted by General Electric      8 days

15. LARGE STEAM TURBINE GENERATOR

Provides the participant with an in-depth look at how T-G units operate, the components and systems involved, and recommended operating practices.

Conducted by General Electric      3 weeks

16. BEARINGS

Provides the participant with information on the operation maintenance and replacement of bearings.

Conducted by Berry Bearing      4 hours

17. ELECTRONICS CORRESPONDENCE

A fundamental electronics section which emphasizes applications and is designed for those with little or no electronics background. A digital electronics section which is designed to cover digital circuits and digital systems common to modern instrumentation and control.

Conducted by Bell & Howell

18. PLANT OUTAGES

Personnel are sent to operating power plants during refueling outages to learn techniques of radiation protection.

19. CORE ANALYSIS

A course designed for the Technical Department engineer in subjects such as reactor physics, thermal hydraulics, reactivity monitoring core thermal limits and core/component lifetimes.

Conducted by Nuclear Associates, Int. 31 days

20. LIMITORQUE VALVES

A course describing the operation and maintenance of Limitorque Valves.

Conducted by Limitorque 2 days



Exhibit I  
Interrogatory Nos. 1(d) and 1(e)

ILLINOIS POWER COMPANY  
QUALITY ASSURANCE INSTRUCTION

QAI- 102.04

Revision 0

TITLE: Quality Assurance Indoctrination and Training Program

Scope of Revision:

**INFORMATION ONLY**  
**CONTROLLED COPY**  
**INFORMATION ONLY**

SIGNATURES			
	Original	Rev. 1	Rev. 2
Prepared by:	<i>A. W. Bell</i>		
QA Supervisors and Interface Review:	<i>D. L. Hennen</i>		
	<i>M. E. Dill</i>		
	<i>M. C. Miller</i>		
Director-QA Approval:	<i>A. J. Brundnick</i>		
Date of Issue:	<i>6/8/81</i>		

## 1.0 PURPOSE/SCOPE

The purpose of this instruction is to describe the requirements and responsibilities for Quality Assurance indoctrination and training of Quality Assurance Department personnel.

## 2.0 DISCUSSION/DEFINITIONS

This instruction contains the requirements and responsibilities for Quality Assurance indoctrination and training of Quality Assurance personnel. This includes individuals who perform Surveillance activities, auditing, procurement document review, procedure/instruction review, Special Processes review, and other activities pertaining to the Quality Assurance effort for Clinton Power Station.

## 3.0 RESPONSIBILITIES

- 3.1 The Director-Quality Assurance is responsible for the implementation of this instruction.
- 3.2 The Audit Coordinator is responsible for the review and revision of this instruction.

## 4.0 INSTRUCTIONS

### 4.1 Indoctrination

- 4.1.1 Quality Assurance Department personnel at a minimum, should receive indoctrination to familiarize them with the following:

- a) The Nuclear Regulatory Commission (NRC) role in regulating nuclear generating plants in relation to 10CFR50, Appendix B, Regulatory Guides, and Industry Codes and Standards.
- b) IP QA program including program objectives, management policies, procedures and instructions.
- c) Identification of job related procedures, instructions, and requirements.
- d) IP General Procedures.

e) IP Safety Manual.

4.1.2 Each Quality Assurance Section Supervisor may add to the QUALITY ASSURANCE INDOCTRINATION CHECKLIST QAI-102.04C01 as deemed appropriate.

4.1.3 Documented evidence utilizing QAI-102.04C01 showing that an individual has received the required indoctrination shall be retained as part of the individuals' training record. This documentation shall be initialed and dated by the individual receiving indoctrination and signed and dated by his supervisor/designee.

#### 4.2 Training

4.2.1 The object of the QA training program is to train each individual in those aspects of the QA program for which he has responsibilities. To obtain this objective the training program should have the following characteristics:

4.2.1.1 Training for each individual shall be to the extent necessary to assure continued satisfactory performance in their job functions, and shall assure that qualifications are maintained.

4.2.1.2 A training plan and schedule which assures that manpower training requirements are met.

4.2.1.3 Initial training based on an individual's previous experience and his assigned functional role, which should include:

- 1) Quality related functions for which he has responsibilities,
- 2) Quality requirements, procedures or instructions to be followed in performance of those functions,
- 3) Interface responsibilities concerning his quality related functions.

- 4.2.1.4 A continuing program with provisions for training of replacement personnel, and retraining or verification that present personnel maintain their proficiency. Retraining should be conducted in areas of weakness as periodically determined by the supervisor.
- 4.2.1.5 The Training Program shall be revised and training provided to reflect significant procedure changes, plant modification, etc.
- 4.2.2 Personnel performing QA surveillances that are intended to achieve and assure quality of safety related parts of a nuclear power plant, or to verify conformance of an item, activity, or document to quality requirements should be sufficiently trained to assure that the activity will be carried out correctly.
- 4.2.2.1 Training requirements shall be based on such factors as previous education, experience, and assigned functional role. When training is required it should include:
- a) Indoctrination with technical objectives of the project, i.e.; to construct, operate, overhaul, or refuel the plant in accordance with regulations, codes, etc. and to define the project organizational responsibilities and relationships.
  - b) Codes, standards, and procedures to be used,
  - c) Surveillance techniques that are to be employed, with guidance regarding their limitations and capabilities,
  - d) On-the-job participation with emphasis on actual performance of the surveillance activities,
  - e) Specialized skills training to assure competence in surveying special processes, as required,

installation, inspection, testing, statistics, nondestructive examination, maintenance, repair, operation, modification of nuclear power plants or associated components and safety aspects of the nuclear facility.

- e) Practices of auditing to include: Audit preparation, team selection, team orientation, audit notification, audit performance, and audit reporting and followup.

NOTE

Auditors-in-training should receive on-the-job training, guidance, and counseling under the direct supervision of a lead auditor.

4.2.4 Once a year, normally during the last calendar quarter, training plans and anticipated budget expenses for the forthcoming year will be summarized and reviewed by departmental supervision. The basis of this review is to assess the current and future training needs and associated costs.

4.2.5 QAI-102.04F01 QA TRAINING ATTENDANCE SHEET shall be utilized to document conducted training sessions. QAI-102.04F01 shall include attendance, date of presentation, topics discussed and name of lecturer/instructor. Supportive documentation such as lesson plans, tests, or any other applicable document should be attached to QAI-102.04F01 as applicable.

4.3 Records

4.3.1 Personnel training records shall be maintained and retained in accordance with QAI-117.01 Records Control.

4.3.2 Personnel training and indoctrination records shall be coded as follows:

File Code - Q01 Record Type - 3304 Retention - L



- f) Additional training in deficient areas as necessary to meet the requirements of the surveillance.

4.2.3 Personnel should receive classroom or on the job training in the following areas to assure their competence and to maintain proficiency for performing audits:

- a) General training in the fundamentals, objectives, characteristics, organization, performance, and results of quality assurance auditing. Specialized training in the audit techniques of examining, questioning, evaluating, reporting, and documenting specific audit items; and methods of identifying, following up and closing out audit findings.
- b) The IP & CPS QA Manual, Safety Analysis Reports, Technical Specifications, nuclear-related codes, standards, regulations, and regulatory guides.
- c) General Structure of quality assurance programs as a whole and applicable elements such as organization; design control; procurement document control; instructions, procedures, and drawings; document control of purchased material, equipment and services; identification and control of materials, parts and components; control of special processes; inspection; test control; control of measuring and test equipment; handling, storage and shipping; inspection, test, and operating status; nonconforming materials, parts, or components; corrective action; quality assurance records; audits; cost of quality; and quality information feedback.
- d) Audit planning in the quality-related functions for the following activities: Design, purchasing, fabrication, handling, shipping, storage, cleaning, erection,

ILLINOIS POWER COMPANY  
QUALITY ASSURANCE INSTRUCTION

QAI- 102.04

Revision 0

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5.0 REFERENCES

5.1 CPS OPERATIONAL QUALITY ASSURANCE MANUAL

5.2 QAI-117.01 RECORDS CONTROL

6.0 APPENDICES/DOCUMENTS

6.1 QAI-102.04C01 QUALITY ASSURANCE INDOCTRINATION CHECKLIST

6.2 QAI-102.04F01 QA TRAINING ATTENDANCE SHEET

# Quality Assurance Indoctrination Checklist

QAI- 102.04C01

Revision 0

Date 6/8/81

Name \_\_\_\_\_

Position \_\_\_\_\_

Date of Employment/Transfer to QA Department \_\_\_\_\_

A. Be familiar with the contents of the following documents:

<u>Document</u>	<u>Initials</u>	<u>Date</u>
1. 10CFR50 Appendix B	_____	_____
2. CPS QA Manual	_____	_____
3. CPS Operational QA Manual	_____	_____
4. QA Instructions	_____	_____
5. CPS FSAR Chapter 17.2	_____	_____
6. IP QA Auditor Guide	_____	_____
7. QA Notices	_____	_____
8. ANSI N45.2-1977	_____	_____
9. ANSI N18.7-1976	_____	_____
10. Other: _____	_____	_____
11. Other: _____	_____	_____

B. Review the following documents:

<u>Document</u>	<u>Initials</u>	<u>Date</u>
1. S&L Project Instructions for CPS	_____	_____
2. IP General Procedures	_____	_____
3. CPS Records Index Matrix	_____	_____
4. NSED Procedure Manual	_____	_____
5. CPS Operating Program Base	_____	_____
6. CPS Startup Manual	_____	_____
7. CTS Operating Manual	_____	_____
8. GE Description of Boiling Water Reactor	_____	_____
9. Clinton Site Activities Procedures	_____	_____
10. Other: _____	_____	_____
11. Other: _____	_____	_____

\_\_\_\_\_  
Supervisor Review\_\_\_\_\_  
Date



ILLINOIS POWER COMPANY  
QUALITY ASSURANCE INSTRUCTION

QAI- 102.05

Revision 0

TITLE: Auditor and Lead Auditor Qualification Program

Scope of Revision:

**INFORMATION ONLY**

**FILE COPY  
INFORMATION ONLY**

**CONFIDENTIAL  
INFORMATION ONLY**

SIGNATURES			
	Original 1	Rev. 1	Rev. 2
Prepared by:	<i>D. J. Ennen</i> D. J. Ennen		
QA Supervisors and Interface Review:	<i>McFellon</i>		
	<i>Hampton</i>		
Director-QA Approval:	<i>ABudnick</i>		
Date of Issue:	1/4/80		

## 1.0 PURPOSE/SCOPE:

The purpose of this instruction is to describe the requirements and responsibilities for training and qualification of Quality Assurance auditors and lead auditors.

## 2.0 DISCUSSION/DEFINITIONS:

### 2.1 Discussion

This instruction delineates the requirements for selection and training of quality assurance audit personnel and for qualification, certification, and maintenance of proficiency of lead auditors.

### 2.2 Definitions

2.2.1 QA Auditor - any individual who performs any portion of a QA audit. Personnel who may act as QA auditors include qualified auditors, specialists, trainees and other management representatives.

2.2.2 Lead Auditor - an individual qualified to plan, organize, and direct an audit, report audit findings, and evaluate corrective action.

## 3.0 RESPONSIBILITIES:

3.1 The Director-QA is responsible for implementation of the requirements and guidelines set forth in this instruction.

3.2 The QA Audit Coordinator (AC) is responsible for:

3.2.1 Periodic review and revision of this instruction.

3.2.2 Maintenance of audit and lead auditor training and qualification records as detailed in this instruction.

## 4.0 INSTRUCTIONS:

### 4.1 Orientation and Training of Auditors

4.1.1 Audit teams selected for quality assurance auditing



assignments should collectively have experience or training commensurate with the scope, complexity, or special nature of the activities audited. Auditors should be given appropriate training or orientation to develop their competence for performing assigned audits.

- 4.1.2 Orientation and training of personnel selected to participate in IP QA audits should consist of the following:
  - 4.1.2.1 Formal or informal study to provide a working knowledge and understanding of Appendix B to 10CFR50, ANSI N45.2, and the CPS Quality Assurance Manuals.
  - 4.1.2.2 Formal or informal training to include: auditing fundamentals, objectives, characteristics, organization, performance, and results. Specialized training may include methods of examining, questioning, evaluating, documenting audit findings, evaluating corrective action, and closing out audit findings.
  - 4.1.2.3 On the job training, guidance, and counseling under the supervision of a certified lead auditor, including such facets as planning, performance, reporting and follow-up action involved in conducting audits.
- 4.1.3 Technical specialists, consultants, management representatives, and other audit personnel who are not expected to certify as lead auditors shall be given training consistent with their participation in audits.
- 4.1.4 The AC shall complete applicable portions of an IP QUALITY ASSURANCE AUDITOR RECORD, PART 1, QAI-102.05F01, and IP QUALITY ASSURANCE AUDITOR RECORD, PART 2, QAI-102.05F02 for each auditor to document the details of an auditor's education, experience, training, and audit participation.

#### 4.2 Qualification of Quality Assurance Auditors

- 4.2.1 Prospective quality assurance auditors should participate in at least two QA audits within a one year period as auditors in training. As an auditor in training, an individual may participate in all phases of an audit under the direct supervision of a certified lead auditor.
- 4.2.2 After participation in two QA audits, an individual is considered to be a qualified auditor. A qualified auditor may participate in all aspects of an audit as assigned by a certified lead auditor.

#### 4.3 Qualification of Quality Assurance Lead Auditors

- 4.3.1 A prospective QA lead auditor shall have participated in at least five QA audits within a period of time not to exceed three (3) years prior to the date of his/her qualification evaluation.
- 4.3.2 In addition to participation in at least five QA audits, a prospective lead auditor shall have the capability to communicate effectively, both verbally and in writing. The Director-QA or his designee shall evaluate these communication skills, and if adequate, sign and date in Block 5 of the auditor's QAI-102.05F01.
- 4.3.3 Prospective lead auditors shall be instructed to the extent necessary to insure their competence in performing audits. The training topics described in Appendix A, QAI-102.05A01, QA LEAD AUDITOR TRAINING CONSPECTUS, shall form the basis of both formal and informal study as appropriate.
- 4.3.4 A prospective lead auditor shall be evaluated for auditing skills and understanding of QA auditing, as applied by IP, by the Director-QA or his designee. The evaluation shall be documented in Block 6 on the individual's QAI-102.05F01.

#### 4.4 Certification of Lead Auditors

- 4.4.1 After a prospective lead auditor has completed the required number of audits, and exhibited acceptable communications skills, and demonstrated acceptable auditing skills, the Director-QA shall certify the individual as a QA lead auditor by signing and dating Block 7 of the individual's QAI-102.05F01.
- 4.4.2 The Director-QA shall complete an ILLINOIS POWER COMPANY QUALITY ASSURANCE LEAD AUDITOR CERTIFICATION (See QAI-102.05A02 for facsimile), in duplicate, for presentation to the individual and retention with the individual's personnel records.

#### 4.5 Maintenance of Proficiency

- 4.5.1 QA lead auditors shall maintain their proficiency through one or more of the following:
- 4.5.1.1 Active participation in at least one QA audit per year.
  - 4.5.1.2 Review and study of codes, standards, procedures, instructions, and other documents related to quality assurance programs and program auditing.
  - 4.5.1.3 Participation in training programs.
- 4.5.2 The Director-QA shall annually evaluate the qualifications of lead auditors and extend the certifications or require additional training of lead auditors. The results of each annual evaluation shall be documented on each lead auditor's IP QUALITY ASSURANCE AUDITOR RECORD, PART 2, QAI-102.05F02.

#### 4.6 Records

- 4.6.1 The Audit Coordinator shall update at least annually the IP QA Auditor Record, Part 2, to document the audit participation of each auditor/lead auditor.

ILLINOIS POWER COMPANY  
QUALITY ASSURANCE INSTRUCTION

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4.6.2 Copies of the updated IP QA Auditor Record, Part 2, shall be forwarded to and retained in the CPS/DRC/Central File per QAI-117.01, RECORDS CONTROL. The original shall be retained in the AC files for future updating.

4.6.3 Completed copies of the IP Quality Assurance Auditor Record, Part 1, shall be forwarded to and retained in the CPS/DRC/Central File per QAI-117.01. The original shall be retained in the AC files.

5.0 REFERENCES:

- 5.1 CPS Quality Assurance Manual
- 5.2 CPS Operational Quality Assurance Manual
- 5.3 ANSI/ASME N45.2-1977, Quality Assurance Program Requirements for Nuclear Facilities
- 5.4 ANSI/ASME N45.2.12,-1977, Requirements for Auditing of Quality Assurance Programs for Nuclear Power Plants.
- 5.5 USNRC Regulatory Guide 1.144, January 1979, Auditing of Quality Assurance Programs for Nuclear Power Plants
- 5.6 QAI-117.01, RECORDS CONTROL

6.0 APPENDICES/DOCUMENTS:

- 6.1 QAI-102.05A01, QA LEAD AUDITOR TRAINING CONSPECTUS
- 6.2 QAI-102.05A02, ILLINOIS POWER COMPANY LEAD AUDITOR CERTIFICATE (FACSIMILE)
- 6.3 QAI-102.05F01, IP QUALITY ASSURANCE AUDITOR RECORD, PART 1
- 6.4 QAI-102.05F02, IP QUALITY ASSURANCE AUDITOR RECORD, PART 2

Training in the following areas shall be given based upon management evaluation of the particular needs of each prospective lead auditor.

- 1.0 Knowledge and understanding of ANSI N45.2, its associated standards, particularly ANSI N45.2.12, and other nuclear-related codes, standards, regulations, and regulatory guides, as applicable.
- 2.0 General structure of quality assurance programs
- 3.0 Audit activities, including:
  - 3.1 Audit planning
  - 3.2 Audit scheduling
  - 3.3 Conduct of audit
  - 3.4 Audit reporting
  - 3.5 Corrective action evaluation
  - 3.6 Corrective action verification
  - 3.7 Close out of audit findings
- 4.0 Personnel behavior
- 5.0 QA authority and responsibility
- 6.0 Definitions of terms used in QA auditing
- 7.0 Audit techniques



ILLINOIS POWER COMPANY LEAD AUDITOR  
CERTIFICATE

QAI-102.05A02

Revision 0

Date 11/4/80

**ILLINOIS POWER COMPANY**

**CERTIFICATION**

QUALITY ASSURANCE  
LLAD AUDITOR

ILLINOIS POWER COMPANY certifies that

has successfully demonstrated by examination his/her  
knowledge of the principles of Quality Assurance  
Auditing as delineated in ANSI N45.2, Quality Assurance  
Program Requirements for Nuclear Facilities.

Presented on \_\_\_\_\_  
in the year \_\_\_\_\_ at DECATUR, ILLINOIS.





IP QUALITY ASSURANCE AUDITOR RECORD, PART 1

QAI- 102.05F01

Revision 0

Date 11/4/80

1. NAME: \_\_\_\_\_

2. EDUCATION:

School/University

Dates

Degree/Certificate

a. \_\_\_\_\_

b. \_\_\_\_\_

c. \_\_\_\_\_

3. EXPERIENCE:

Employer (latest employer  
first) Dates

Job/Position

a. \_\_\_\_\_

b. \_\_\_\_\_

c. \_\_\_\_\_

d. \_\_\_\_\_

4. AUDIT TRAINING COURSES:

Title/Description

Dates

a. \_\_\_\_\_

b. \_\_\_\_\_

c. \_\_\_\_\_

d. \_\_\_\_\_

5. AUDIT COMMUNICATIONS SKILLS:

Evaluated by: \_\_\_\_\_

(Name)

(Position)

(Date)

6. LEAD AUDITOR EVALUATION:

Evaluated by: \_\_\_\_\_

(Name)

(Position)

(Date)

7. CERTIFICATION:

Certified Lead Auditor by: \_\_\_\_\_

(Name)

(Position)

(Date)

Page \_\_\_\_\_ of \_\_\_\_\_

## IP QUALITY ASSURANCE AUDITOR RECORD, PART 2

QAI- 102.05F02

Revision 0

Date 11/4/80

1. Name: \_\_\_\_\_

## 2. AUDIT PARTICIPATION:

Organization Audited

### Dates

### 3. ANNUAL EVALUATION:

Signature \_\_\_\_\_

Date \_\_\_\_\_

Results/Comments
<p>1. The first part of the report, which discusses the background and objectives of the study, is well-written and clear.</p> <p>2. The methodology section is also well-written, but it is a bit long and could be shortened.</p> <p>3. The results section is well-written, but it is a bit long and could be shortened.</p> <p>4. The conclusion section is well-written, but it is a bit long and could be shortened.</p>

Exhibit J  
Interrogatory No. 2

CPS-FSAR

POWER PLANT MANAGER

Name: Thomas F. Plunkett

Citizenship: U.S.A.

Age: 41

Prior AEC or NRC License Held: Saxton - AEC RO Qualified  
D.C. Cook - NRC SRO Unit 1

Formal Education: B.S.M.E.  
University of Wisconsin, 1961  
  
M.S.N.E.  
University of Wisconsin, 1962

Training: BWR Fundamentals  
CPS Systems Training

Work Experience: Illinois Power Company

1977 - Present Power Plant Manager, Clinton Power Station

Other Experience:

1969 - 1977 Technical Supervisor, D.C. Cook Nuclear Station

Responsible for checkout, preoperational, and startup testing for D.C. Cook Units 1 & 2. Also responsible for nuclear and performance engineering, control and instrumentation, chemistry, radiation protection, and environmental activities.

Startup engineer/reactivity analyst - Zion 1, Commonwealth Edison Co. (on loan from American Electric Power).

1962 - 1969 Nuclear Engineer/Project Engineer, McDonnell Douglas Corporation

Performed reactor and shield physics calculations, nuclear materials selection and thermal/hydraulic analyses on nuclear power/propulsion systems.

Project Engineer in charge of nuclear power systems for the Advanced Systems Division.

Publications/Memberships:

Author of six technical papers and one technical journal article. American Nuclear Society member.

CPS-FSAR

ASSISTANT POWER PLANT MANAGER

Name: Larry S. Brodsky

Citizenship: U.S.A.

Age: 32

Formal Education: BS Chemistry  
University of Illinois, 1969

Training: CPS Systems Training  
BWR Fundamentals  
U.S. Navy Nuclear Power Prototype  
U.S. Navy Nuclear Power School

Work Experience: Illinois Power Company

1980 - Present Assistant Power Plant Manager, Clinton Power Station. Responsibilities include overall supervision of the Operations and Radchem Departments at Clinton Power Station.

1977 - 1980 Supervisor - Plant Operations, Technical Supervisor, Plant Supervisor, Clinton Power Station

Responsibilities included plant procedure preparation and review, design review, development of Technical Specifications, training, and supervision of Operations staff.

1975 - 1977 Results Engineer, Assistant Plant Supervisor, Baldwin Power Station (fossil fueled)

Responsibilities included plant testing, inspection, and supervision of operating personnel.

Other Experience: U.S. Navy

1969 - 1975 Qualified Engineer Officer and Engineering Officer of the Watch in submarines.

Responsibilities included supervision of reactor plant/steam plant operation and maintenance and training of personnel.

Memberships: American Nuclear Society

CPS-FSAR

Assistant Power Plant Manager

Name: Don Y. Cain

Citizenship: U.S.A.

Age: 39

Formal Education: B.S.M.E.  
Auburn University, 1960-1965

M.S. in Nuclear Engineering  
Georgia Institute of Technology, 1971-1972

Training: Westinghouse Nuclear Training Center, 1972-1973  
SFO License Preparatory Training  
CPS Systems Training

Work Experience: Illinois Power Company

1980 - Present Assistant Power Plant Manager, Clinton Power Station

Responsibilities include overall supervision of the Mechanical, Stores Electrical and C&I Departments at CPS.

---

1976 - 1980 Supervisor - Maintenance, Clinton Power Station

Duties include direction and supervision of the development of the mechanical, electrical and instrument/controls maintenance program, and development of the plant stores program.

Other Experience:

1971 - 1976 Alabama Power Co., Farley Nuclear Plant

Maintenance Supervisor

Directed development of plant mechanical, electrical, and instrument/controls maintenance program.

1969 - 1971 Alabama Power Co., Greene Country Steam Plant

Generating Plant Engineer in a 500 MW coal-fired power plant

1968 - 1969 E.E. duPont deNemours and Co., Inc.,

Provided engineering consulting services to several duPont plants.



CPS-FSAR

1966 - 1968

Southern Electric Generating Co.,

Test Engineer in a 1000 MW coal-fired power station

1965 - 1966

Southern Services, Inc.,

Junior Engineer and Assistant Engineer in a  
power plant mechanical design section.

SUPERVISOR-PLANT OPERATIONS

Name: Douglas M. Antonelli

Citizenship: U.S.A.

Age: 34

Prior NRC License Held: Senior Reactor Operator's License #Sop 2280 for Brunswick Unit #2

Formal Education: Richland Community College A.S. degree

Training: Electronic Technical "A" School, USN (1965)  
Nuclear Power Training, USN (1966)  
Electronic Technical "B" School, USN (1969)  
Brunswick Steam Electric Plant Licensed Training (11/73)  
GE BWR Cold License Certification (2/74)  
CPS Operator License Training

Work Experience: Illinois Power Company

1980 - Present Supervisor Plant Operations, Clinton Power Station

Direct all Operations Department activities including FSAR amendment work, procedure preparation, startup support activities, technical specifications development and design review.

1976 - 1980 Shift Supervisor, Clinton Power Station

Coordinated procedure preparation effort of Operations Dept.

Other Experience: Carolina Power and Light Company

1973 - 1976 Held the positions of Auxiliary Operator, Control Room Operator, and Operations Shift Foreman at the Brunswick Steam and Electric BWR Plant. Experience during this period includes the testing, startup, and commercial operation of the unit. Also assigned to the Training Dept. as instructor for the operator retraining program.

1970 - 1973 U.S. Navy

Senior/Leading Reactor Operator at the S5G Naval Nuclear Propulsion Prototype. Duties during this period include supervising a group of Reactor Operators in the maintenance and operation of reactor control equipment and the training of Reactor Operator students.

1967 - 1968

U.S. Navy

Reactor Operator assigned to the USS Sam Houston, a nuclear submarine. Qualified to stand various engineering watchstations and perform maintenance on electronic, reactor control equipment.

SHIFT SUPERVISOR

Name: Billy J. Brehm

Citizenship: U.S.A.

Age: 36

Previous Licenses: Senior Reactor Operator - Cooper Nuclear Station

Formal Education: Graduated Stephen-Decatur High School, 1962  
1 yr. Millikin University, 1962-1963  
1 semester University of Illinois, 1971  
U.S. Navy: Electricians Mate "A" School  
Basic Nuclear Power School  
Electrical Operator DLG Prototype

Work Experience: Illinois Power Company

1976 to present Shift/Assistant Shift Supervisor, Clinton Power Station.

Participated in procedure writing, review of diagrams and prints for operating station equipment, and licensed operator training.

Other Experience:

1972 - 1975 Nebraska Public Power District

Station Operator, Reactor Operator, Senior Reactor Operator, Cooper Nuclear Station

Participated in the startup and initial operation of Cooper Nuclear Station

1965 - 1971 U.S. Navy Nuclear Power Program

Qualified Electrical Operator (EO) and Shutdown Maneuvering Area Watch (SMAW) aboard one S5W nuclear submarine. Commissioned and participated in propulsion plant of another S5W nuclear submarine and qualified EO and SMAW.

SHIFT SUPERVISOR

Name: Gordon H. Reed

Citizenship: Canada

Age: 33

Previous Licenses: Senior Reactor Operator-San Onofre Generating Station (SONGS)

Education: Graduated Savanna High School, 1965  
1½ years Fullerton J.C. (math) starting in 1965  
Completed operator apprentice training at Southern California Edison Co., 1969  
Completed RO training at SONGS, 1974  
Completed SRO training at SONGS 1976

Work Experience: Illinois Power Company

1978 - Present Shift/Assistant Shift Supervisor, Clinton Power Station

Prepared operating dept. administrative procedures, supervised integrated plant procedure preparation, worked in Illinois Power Startup group, participated in review of proposed Technical Specifications, CPS-FSAR and operating procedures. Participated in the operator training program for CPS.

Other Experience:

1972 - 1978 Nuclear Plant Equipment Operator, Nuclear Assistant Control Operator, Nuclear Control Operator at SONGS.

Duties included operation inside and outside the main control room and a temporary assignment as a training instructor (Operating Foreman) for a group of 17 operator license candidates, teaching plant systems.

1968 - 1972 Apprentice Plant Equipment Operator, Plant Equipment Operator at various fossil fuel plants.

Duties included operation of equipment outside of the central control rooms.

CPS FORM  
SHIFT SUPERVISOR

Name: David B. Sykes

Citizenship: U.S.A.

Age: 40

Prior License Held: Senior Reactor Operator's License for Brunswick Unit 2

Formal Education: Whitewater State College,  
Whitewater, Wisc. (30 semester hours)

Richland Community College  
(65 semester hours - A.A. Degree)

Training: Intercommunications "A" school (1962) (Navy)  
U.S. Navy Nuclear Power Training (1963)  
Brunswick Steam Electric Plant Licensed Training (197  
GE BWR Cold License Certification  
BWR Fundamentals  
CPS Systems Training

Work Experience: Illinois Power Company

1977 - Present Shift Supervisor, Clinton Power Station  
Assisted in initial CPS procedure preparation.  
A primary responsibility was the development of  
CPS technical specifications.

Other Experience:

1977 Sargent and Lundy

Assigned to Nuclear Startup group. Performed startup  
interface work with various utilities, primarily  
Illinois Power Co's. Clinton Project.

1970 - 1976 Carolina Power and Light

Control room operator at Brunswick Steam Electric  
Plant

Experience during this period includes startup  
testing and commercial operation of Unit 2.

1964 - 1969 U.S. Navy Nuclear Power Program



CPS-FSAR

SHIFT SUPERVISOR

Name: Fred E. Worrell

Citizenship: U.S.A.

Age: 30

Previous Licenses: Reactor Operator - Brunswick Steam Electric Plant (BSEP)

Education: Graduated Davis High School, 1969  
U.S. Navy: Electronics Technician "A" School  
Navy Nuclear Power School  
Reactor Operator S5G Prototype

Work Experience: Illinois Power Company

1978 to present Shift/Assistant Shift Supervisor, Clinton Power Station

Participated in procedure writing, development of the Fire Protection Plan, review of diagrams and prints for operating station equipment, and licensed operator training.

Participated in the BWR owners subgroup formulation of the emergency procedures guidelines

Other Experience:

1975 - 1978 Carolina Power and Light

Auxiliary Operator, Control Room Operator, BSEP.

Participated in operation and refueling of Brunswick Unit 2. Participated in initial testing, startup, operation and refueling of Brunswick Unit 1.

1969 - 1975 U.S. Navy Nuclear Power Program

Qualified Reactor Operator and Shutdown Maneuvering Area Watch aboard the USS Hammerhead, SSN 663.

CPS-FSAR

SUPERVISOR - C&I

Name: R. Steven Richey

Citizenship: U.S.A

Age: 43

Formal Education: Eastern Illinois University, B.A. (BOG) 1981  
U.S. Navy - Nuclear Power School, Electronics School, Advanced Electronics School. RO-EWS qualified.

Work Experience: Illinois Power Company

1977 - Present Supervisor - C&I at Clinton Power Station. Responsible for surveillance, maintenance, preventive maintenance and spare parts programs.

1975 - 1977 Startup engineer and C&I supervision at a fossil fueled power plant.

Other Experience: Various employers - 18 years in the electronics field, of which 14 years were in the nuclear field and 12 years were in supervisory positions. Experience included 4 military nuclear unit constructions and startup phase testing. Also had 3 years at a nuclear repair facility writing maintenance procedures and performing maintenance on nuclear submarines.

CPS-FSAR

SUPERVISOR - MECHANICAL

Name: Jerry L. Jones

Citizenship: U.S.A

Age: 41

Education: Graduated, Washington High School, Phoenix, Arizona, 1958; Navy Nuclear Training Program with 1 year of advanced electronics training.

Work Experience: Illinois Power Company, Clinton Power Stations<sup>X</sup>:

1978 - Present Supervisor/Assistant Supervisor - Mechanical. Duties include procedure preparation, review of equipment specifications for maintainability, selection of spare parts and tools, supervision of maintenance personnel in corrective and preventive maintenance activities, and preparation and implementation of the mechanical maintenance personnel training program.

Other Experience: U.S. Navy

1962 - 1977 Positions included Reactor Operator, Engineering Watch Supervisor, Supervisor-Reactor Controls Division, Engineering Administrative Assistant, and Senior Enlisted Watch Supervisor aboard various naval vessels.

Also included were Reactor Operator, Chief Reactor Technician, Training Instructor, Training Coordinator, Supervisor-Electrical, Assistant Maintenance Training Group Supervisor, Planner and Scheduler, and supervision of a 35-man maintenance group at 4 reactor prototypes at Idaho Falls.

SUPERVISOR - TECHNICAL

Name: John G. Cook

Citizenship: U.S.A.

Age: 33

Formal Education: B.S. Engineering Physics,  
University of Illinois, 1969

M.S. Nuclear Engineering,  
University of Illinois, 1970

M.B.A.  
Golden Gate University, 1976  
Registered Professional Engineer, Illinois, 1976

Training: CPS Licensed Operator Training Program

Work Experience: Illinois Power Company

1977 - Present Supervisor - Technical, Clinton Power Station

Supervised the activities of the Nuclear Results Engineers assigned to Clinton Power Station.

1975 - 1977 Training Coordinator

Supervised Training Instructors in the preparation of training courses, interfaced with outside contractors who were presenting training, taught courses related to the Clinton Station.

Other Experience: U.S. Navy

1970 - 1975 Instructor U. S. Navy Nuclear Power School

Taught courses in Heat Transfer, Reactor Physics and Core Design to naval personnel.

CPS-FSAR

Supervisor - Nuclear

Name: Eric A. Schweitzer

Citizenship: U.S.A.

Age: 29

Education: B.S. Engineering Physics, Univ. of Illinois, 1973  
M.S. Nuclear Engineering, Univ. of Illinois, 1974

Work Experience: Illinois Power Company

1977 - present Nuclear Engineer, Supervisor - Nuclear  
at Clinton Power Station

Prepared Technical Dept. administrative  
and nuclear engineering procedures. Performed  
technical review of special purchases and  
FSAR. Participated in CPS operator training  
and simulator training.

Other Experience: Commonwealth Edison Co., Quad Cities  
Power Station

1974 - 1977 Nuclear Engineer

Duties included reactor performance monitoring  
and calculations, control rod pattern deter-  
mination, and nuclear instrumentation calibra-  
tion.

SUPERVISOR - RADCHEM

Name: Robert E. Harris

Citizenship: U.S.A.

Age: 40

Formal Education: B.S. Chemistry, 1975  
University of Hartford (Conn.)

Training: U.S. Navy Nuclear Power School  
U.S. Navy Nuclear Power Prototype  
U.S. Navy Engineering Laboratory Technician School  
CPS Operator Training Program

Work Experience: Illinois Power Company

1976 - Present Supervisor - Radchem at Clinton Power Station.  
Duties include supervision of chemistry, radiation protection and radwaste operation staff during design and construction of Clinton Power Station.

Other Experience:

1973 - 1976 Health Physicist at Millstone Nuclear Station.  
Duties included supervision of H.P. for 1 BWR and 1 (CE) PWR during construction, startup and operation. BWR experience included two refuelings with feedwater sparger replacements.

1967 - 1973 Operations Department and Radchem Department at Connecticut Yankee Atomic Power Station, Haddam Neck, Conn.  
  
Duties included operation of plant, chemistry and radiochemistry and radiation protection. Participated in initial plant startup, four refuelings, including steam generator repair, turbine overhauls, plant modifications (LPCI installation), spent fuel shipment.

1960 - 1967 U.S. Navy nuclear program  
  
One year formal school and prototype training. Six months Engineering Laboratory School. Three years instructor duty. Three years aboard nuclear (PWR) powered submarine.



SUPERVISOR - RADIATION PROTECTION

Name: Erskin O. Hickman

Citizenship: U.S.A.

Age: 31

Formal Education: B.S., Physics, 1978, University of North Alabama

Work Experience: Illinois Power Company

1981 - Present Supervisor - Radiation Protection at Clinton Power Station. Duties include supervision of radiation protection staff during design and construction of Clinton Power Station.

Other Experience:

1979 - 1981 Nuclear Engineer, Tennessee Valley Authority, Chattanooga, Tennessee. Provided engineering support to nuclear stations in the area of radioactive waste management.

1978 - 1979 Health Physicist, Browns Ferry Nuclear Plant. Provided supervision of radiation protection staff.

1976 - 1978 Radiochemical Analyst, Tennessee Valley Authority. Provided research and development support for TVA's uranium milling and mining environmental assessment program.

1975 - 1976 Health Physics Technician, Browns Ferry Nuclear Plant. Provided Health Physics surveillance and assistance for all station operations involving radiological work.

1974 - 1975 Health Physics/Radiochemical Technician, D. C. Cook Nuclear Plant. Provided Health Physics, chemistry and radiochemistry assistance for operation.

1973 - 1974 Health Physics Technician, University of Maryland. Provided Health Physics assistance for students and staff in an educational environment.

Professional Organizations: Member of American Nuclear Society, Chattanooga Section; Member of Health Physics Society; Alternate member of EEI Health Physics Committee.

CPS-FSAR

SUPERVISOR - TRAINING

Name: Richard F. Schaller

Citizenship: U.S.A

Age: 29

Formal Education: B.S., Engineering Physics, University of Illinois, 1974

Training: 1974 - Navy Nuclear Power School Officer's Course  
1975 - Navy Nuclear Prototype Training  
1979 - Present - Clinton Power Station Operator Training Program

Work Experience: Illinois Power Company:

1980 - Present Supervisor - Training, coordinating the training effort at Clinton Power Station

1979 1980 Engineering staff at Clinton Power Station. Duties included startup group scheduling work.

Other Experience: U. S. Navy

1974 - 1979 Naval officer in the nuclear submarine program, including four years' operational experience as an Engineering Officer of the Watch and Engineering Department Division Officer.

Richland Community College:

1980 - Present Part-time instructor in Reactor Physics and Heat Transfer and Fluid Flow.

Professional Associations: Illinois Society of Professional Engineers;  
National Society of Professional Engineers;  
Society of American Military Engineers;  
Midwest Nuclear Training Association.

Exhibit J  
Interrogatory No. 2

## EXHIBIT J

The qualifications of CPS Operations personnel for each non-supervisory position are shown on the following resumes. Since these resumes contain personal information, the names of the employees holding these positions have not been provided.

Training Instructor #1

Citizenship: U.S.A.

Age: 31

Formal Education: High School

Training: 1970 - Navy Nuclear Power School  
1971 - Navy Nuclear Prototype Training  
1977 - Present - Clinton Power Station  
Operator Training Program

Work Experience: Illinois Power Company:

1978 - Present Training Instructor

1977 - 1978 Control Room Operator - Participated in procedure  
writing, review of prints for station  
equipment and operator training

Other Experience: U.S. Navy

1969 - 1977 U.S. Navy Nuclear Power Program - qualified  
mechanical operator and engineering watch  
supervisor

Training Instructor #2

Citizenship: U.S.A.

Age: 31

Formal Education: High School

1969 - University of Alabama - 31 semester hours

1978 - Howard Community College, Columbia, Md. -  
6 semester hours

CPS STA PROGRAM - 2 semester hours

Training: 1969 - U.S. Navy - Electronics Technician "A"  
School

1971 - U.S. Navy Nuclear Power School/ Nuclear  
Prototype Training

Work Experience: Illinois Power Company:

1979 - Present Training Instructor - (See job description)

Other Experience:

1978 - 1979 General Physics Corporation, Columbia Md. -  
Staff Training Specialist - Responsible for  
writing of system descriptions, and teaching  
during hot license and cold license training  
course

1969 - 1978 U.S. Navy - qualified reactor operator on a  
submarine nuclear power plant.

Professional  
Associations:

American Nuclear Society

Midwest Nuclear Training Society



Training Instructor #3

Citizenship: U.S.A.

Age: 30

Previous NRC

Licenses: Reactor Operator License - James A. Fitzpatrick  
Nuclear Power Plant

Formal Education: High School

68 - 69 Indiana State University, Terre  
Haute, In

Training: Basic Propulsion and Engineering, Graduated  
1 of 117

Machinist Mate Class "A" School, Graduated  
2 of 26

U.S. Naval Nuclear Power School, Graduated  
134 of 308

Nuclear Power Plant Operator, Graduated  
4 of 96

James A. Fitzpatrick Nuclear Power Station Hot  
License Operator Training Program

Work Experience: Illinois Power Company:

80 - Present Training Instructor - developing and conducting  
training for the Clinton Power Station staff.

Other Experience:

77 - 80 Senior Nuclear Operator at James A. Fitzpatrick  
Nuclear Power Plant

70 - 77 U.S. Navy Machinist Mate - qualified on all  
nuclear power plant mechanical operator  
watch stations.

Technical Department Specialist #1

Citizenship: U.S.A.

Age: 23

Formal Education: B.S. Degree, Physics,  
Illinois State University - 1980

Training: Certified Radiological Monitor - Illinois ESDA -  
1980

Clinton Power Station Operator System Training

Certificates from Dept. of Defense

Civil Defense Director/Coordinator - July, 1979

Civil Defense, U.S.A. - November, 1978

Work Experience: Illinois Power Company

6/80 - Present Technical Department Specialist (see job description)

Other Experience:

7/76 - Present Eureka Emergency Services and Disaster Agency -  
Secretary

Disaster Preparedness Planning

Professional  
Associations:

SIGMA ZETA Honorary Science Society

American Physical Society

American Institute of Physics

Nuclear Engineer #1

Citizenship: U.S.A.

Age: 24

Formal Education: Kansas State University - B.S. Nuclear Engineering  
1980

Training: Clinton Power Station Operator System Training  
Reactor Core Analysis Computer Training

Work Experience: Illinois Power Company  
1/2/81 - Present Nuclear Engineer (see job description)

Professional  
Associations: Engineer In Training Kansas

Nuclear Engineer #2

Citizenship: U.S.A.

Age: 30

Formal Education: B.S. Mathematics, B.S., Nuclear Engineering,  
University of Illinois, 1978  
M.S., Nuclear Engineering, University of Illinois

Training: 1972 - U.S. Air Force Undergraduate Pilot  
Training Course  
1973 - U.S. Air Force Fighter Weapons Training  
Course  
1979 - Present Clinton Power Station Operator  
Training Course

Work Experience: Illinois Power Company  
1979 - Present Nuclear Engineer (see job description)

Other Experience:  
1978 - 1979 Graduate Research Assistant, University of  
Illinois, Developing computer codes for  
nuclear engineering calculations.  
1974 - 1978 Fighter pilot, 170th TAC FTR Squadron,  
Ill Air National Guard, Flying

Professional  
Associations: American Nuclear Society

Results Engineer #1

Citizenship: U.S.A.

Age: 25

Formal Education: High School - Parkway West, Chesterfield, Mo.  
Earned BSEE at University of Missouri - Columbia

Work Experience: Illinois Power Company

7/6/81 - Present Results Engineer - (see job description)

Other Experience: University of Missouri - Columbia

Summer '78 Participant (Junior Engineer) in an Energy  
Survey Project - Surveyed campus outside lighting

Professional  
Associations: Member IEEE

Results Engineer #2

Citizenship: U.S.A.

Age: 23

Formal Education: B.S. in Mechanical Engineering from Bradley University in 1979

Training: IRD Mechanalysis Inc. Vibration Analyst Course, June, 1980, Presently in IPC Clinton Power Station Operator Training Program

Work Experience: Illinois Power Company

1980 - Present Results Engineer (see job description)



Results Engineer #3

Citizenship: U.S.A.

Age: 22

Formal Education: B.S., Electrical Engineering, University of Illinois, 1981

Work Experience: Illinois Power Company:

5/18/81 - Present Results Engineer - (See job description)

Other Experience: United Nuclear Industries, Richland, WA

6/79 - 8/79 Student Trainee - Electrical Engineer

Results Engineer #4

Citizenship: U.S.A.

Age: 23

Formal Education: B.S. Electronics Engineering Technology  
University of South Dakota - 1980

Training: Clinton Power Station System Training  
Clinton Power Station Startup Test Group  
OJT Program

Work Experience: Illinois Power Company

1980 - Present Results Engineer (see job description)  
Currently on temporary assignment to the  
CPS Startup Test Group revising construction  
turnover scope packages and assisting startup  
engineers in system testing.

Other Experience: Dale Electronics

5/79 - 6/80 Electronics Technician responsible for  
electronic.

Results Engineer #5

Citizenship: U.S.A.

Age: 23

Formal Education: Southern Illinois University  
B.S. Mechanical Engineering Technology - 1980

Training: Clinton Power Station System Training  
Clinton Power Station Startup Test Group  
OJT Program

Work Experience: Illinois Power Company

9/80 - Present Results Engineer (see job description)  
Currently on temporary assignment to the  
CPS Startup Test Group as an assistant to the  
System Flushing Engineer responsible for  
planning, scheduling and coordinating fluid  
system flushes and hydrostatic tests.

Professional Associations: American Society of Mechanical Engineers

Results Engineer #6

Citizenship: U.S.A.

Age: 27

Formal Education: University of Missouri - B.S. Mechanical Engineering - 1978

Training: Clinton Power Station Systems Training  
Clinton Power Station Startup Test Group  
OJT Program

Work Experience: Illinois Power Company

8/80 - Present Results Engineer (see job description)  
Currently assigned to the CPS Startup Test Group responsible for specifying, supervising, and evaluating power plant system testing.

Other Experience: Oklahoma Gas & Electric Co.

12/78 - 8/80 Fossil Power Plant Results Engineer responsible for monitoring power plant performance, system hardware modification review and non-destructive test supervision.

Professional Associations: Engineer in Training Missouri

Assistant Mechanical Supervisor #1

Citizenship: U.S.A.

Age: 35

Formal Education: B.S. Mechanical Engineering, University of Illinois, 1975

Training: 1963 - Navy MM "A" School  
1963 - 1964 Navy Nuclear Power School  
1964 - Navy Prototype Training  
Clinton Power Station Training Courses on  
BWR Technology and Large Steam Turbine  
Generator Operation

Work Experience: Illinois Power Company  
10/79 - Present Assistant Supervisor Mechanical  
3/78 - 10/79 Mechanical Engineer (see job description)

Other Experience:  
6/63 - 7/79 U.S. Navy  
Machinist Mate 1st Class (E-6) in Nuclear  
Power Program, Qualified Engineering Watch  
Supervisor, including 5 years maintenance and  
operational experience on nuclear and engine  
room components.

Professional  
Associations: Danville Engineers Club Scholarship  
Who's Who in American Junior Colleges listing

Assistant Mechanical Supervisor #2

Citizenship: U.S.A.

Age: 41

Formal Education: High School

Class "A" Engineman School (U.S. Navy),  
San Diego, California 1957

U.S. Navy Nuclear Power Training School 1963

Training: U.S. Navy Schools:

Class "A" Engine School 5/30 - 7/9/57

Nuclear Power School and Prototype --top 15%  
9/62 - 10/63

Career Information and Counseling School

Navy Shipboard Instructor Training

Work Experience: Illinois Power Company

4/14/80 - Present Assistant Supervisor Mechanical (see job  
description)

Other Experience: U.S. Navy:

- 1) Four (4) years as a Diesel Propulsion operator and mechanic
- 2) 1½ years Auxiliaries operation and repair, including Air Conditioning, Refrigeration, Hydraulics and Small Boat Engines
- 3) 1½ years Instructor at US Navy Nuclear Power Training Unit
- 4) Eight (8) years operation and maintenance of Nuclear Propulsion Plants, including qualification on all Watchstations from Messenger through Engineer Officer of the Watch in a two (2) Reactor complex and Engineer Officer of the Watch in an eight (8) Reactor complex
- 5) Seven (7) years planning Nuclear and non-Nuclear jobs, writing procedures and coordinating Nuclear work on Nuclear-powered surface ships and submarines



Other Experience: (Cont'd)

- 6) Twelve years as Quality Control Inspector and Quality Assurance Supervisor and Inspector, Ship Supervisor for Nuclear refueling, and other major Nuclear jobs, including various valve and pipe repairs and replacements requiring the use of freeze seals, Reactor Coolant Pump replacement, and Steam Generator inspection and repair.
- 7) Assigned as Main Engines Officer aboard US Navy Aircraft Carrier with 1200 PSI steam plant. Responsible for the ship's four (4) Main Propulsion Units and two (2) Auxiliary Machinery Rooms.
- 8) Five major overhauls including a Nuclear Refueling

Mechanical Engineer #1

Citizenship: Indian

Age: 31

Formal Education: Govt. High School - Darul-Vloom, India

B.S. in Thermomechanical & Energy  
Conversion at University of Illinois at  
Chicago Circle

M.S. in Heat Transfer (discontinued) at University  
of Illinois at Chicago Circle

Work Experience: Illinois Power Company

11/80 - Present Mechanical Engineer (see job description)

Other Experience: University of Illinois at Chicago Circle

3/80 - 6/80 Teaching Assistant - Duties involved teaching  
Lab. of Thermodynamics

Mechanical Engineer #2

Citizenship: U.S.A.

Age: 22

Formal Education: Marquette University, Milwaukee, Wisconsin  
B.S. Mechanical Engineering, 1980

Work Experience: Illinois Power Company

10/80 - Present Mechanical Engineer (see job description)

8/80 - 10/80 Results Engineer (see job description)

Mechanical Engineer #3

Citizenship: U.S.A.

Age: 23

Formal Education: B.S., Mechanical Engineering, Iowa State University, 1981

Work Experience: Illinois Power Company:

6/1/81 - Present Engineer, Clinton Power Station -  
(See job description)

Other Experience: Sargent and Lundy Engineers,

6/78 - 5/80 Co-op student drafting, engineering mechanics,  
H.V.A.C., C & I

Total: 1 yr. 3 mos. experience

Professional  
Associations:

American Society of Mechanical Engineers

General Repairman - Certified Welder #1

Citizenship: U.S.A.

Age: 29

Formal Education: 1967 - 70, Lakeview High School

Training: U.S. Navy Schools:

Nuclear Power Training Unit (Maintenance Training Group) 32 wks nuclear component welding school, 8 wks firefighting and damage control, 18 wks pipefitting and shipfitting school

Work Experience: Illinois Power Company

6/13/80 - Present General Repairman, Certified Welder (see job description)

Other Experience: U.S. Navy

12/71 - 6/80 Active Duty

Hull Technician, Certified Nuclear Components Welder

Machinist #1

Citizenship: U.S.A

Age: 35

Formal Education: High School

Training: 1967 - Machinist's Training Program, Eureka Co.,  
Bloomington

1972 - U.S. Dept. of Labor apprenticeship program  
for Tool and Die Makers

Bloomington AREA Vocational Training Center,  
Bloomington, IL

Work Experience: Illinois Power Company:

2/16/81 - Present Machinist (See job description)

Other Experience:

1967 - 1972 Machinist, Eureka Company, Bloomington, Illinois

1972 - 1976 Tool & Die Apprenticeship, Eureka Company,  
Bloomington, Illinois

1976 - 1981 Tool & Die Maker, Eureka Company, Bloomington,  
Illinois



Repairman #1

Citizenship: U.S.A.

Age: 29

Formal Education: West Anchorage High School  
1970 - 71 Virginia Military Institute  
1971 - 74 U.S. Naval Academy  
1980 - Present Richland Community College

Training: U.S. Navy Machinist Mate "A" School  
U.S. Naval Nuclear Power School  
U.S. Naval Nuclear Prototype Training

Work Experience: Illinois Power Company  
1980 - Present Repairman (See job classification)

Other Experience: U.S. Navy  
1974 - 1980 E-6 Machinist Mate, U.S. Navy Nuclear Submarine Program. Qualified Engine Room Supervisor & Submarines. Performed mechanical watchstander duties on a naval nuclear propulsion plant.

Repairman #2

Citizenship: U.S.A.

Age: 27

Formal Education: High School

Training: U.S. Naval Nuclear Power School

U.S. Naval Nuclear Prototype Training

Machinist Mate "A" School

Additional Military Schools: air conditioning,  
diesel engines, QA Supervisor course, Maintenance Supervisor course and Instructor Training Techniques.

Work Experience: Illinois Power Company

8/80 - Present Repairman (see job description)

Other Experience: U.S. Navy

1972 - 1980 Machinist Mate in the Naval Nuclear Propulsion Program responsible for operation and maintenance of nuclear propulsion plant mechanical systems. This includes three years experience as an instructor of nuclear operator candidates.

Repairman #3

Citizenship: U.S.A.

Age: 25

Formal Education: Graduate High School, Boone Valley Community  
High School, Renwick, Iowa

Training: U.S. Navy Nuclear Power School - 1975  
U.S. Navy Nuclear Prototype Training - 1976  
U.S. Navy Machinist Mate "A" School - 1975

Work Experience: Illinois Power Company  
1980 - Present Repairman (see job description)

Other Experience: U.S. Navy  
1974 - 1980 Machinist Mate 1st Class (E-6) in Naval Nuclear  
submarine program, operating, repairing and  
training new personnel on Nuclear Engineering  
systems & equipment.

Repairman #4

Citizenship: U.S.A.

Age: 25

Formal Education: High School  
Presently attending Richland Community College

Training: 1975 - Navy Nuclear Power School  
1976 - Navy Nuclear Prototype Training  
1974 - Navy Machinist Mate "A" School  
1977 - Navy Machine Tool School

Work Experience: Illinois Power Company  
1980 - Present Repairman (see job description)

Other Experience: U.S. Navy  
1974 - 1980 U.S. Navy Submarine Qualified Nuclear Machinist Mate including 4 years operational and repair experience of which 18 months was in refueling overhaul. Duties included operation and maintenance of naval nuclear propulsion plant mechanical systems.

Repairman #5

Citizenship: U.S.A.

Age: 33

Formal Education: Northern Virginia Community College -  
Mechanical Erg Technology 50 qtr hours 1967  
(1 year formal credit) U.S. Army Nuclear Power  
School, Virginia, Graduated 1972

Training: Instructor Training U.S. Army, 2 weeks;  
Fairbants Morse and EMD Diesel Engine School,  
Gas Turbine School, Air Conditioning and Refrigeration (5 weeks).

Work Experience: Illinois Power Company  
6/16/80 - Present Repairman - (See job description)

Other Experience: 2/79 - 6/80 Power Cutting Inc. - QA/QC Systems  
Field Engineer  
10/78 - 1/79 Chem Nuclear Systems - Radiation  
Waste Disposal Tech Engineer  
1972 - 1978 U.S. Army - Nuclear Operator,  
Senior Mechanic & Instructor

Repairman #6

Citizenship: U.S.A.

Age: 26

Formal Education: High School

Training: Naval: Machinist Mate "A" School  
Graduated 1st in class  
Nuclear Power School -  
Graduated upper 50%  
Prototype SlW -  
Graduated upper 50%, highly recommended  
for instructor duty  
High Pressure Emergency Welding and  
Brazing School  
Worthington High Pressure Air Compressor  
School - Graduated 1st in class  
Steam Generator, secondary chemistry school  
8000GPD Evaporator School - 1st in class  
Quality Assurance School  
Oxygen Acetylene, Gas Welding and Cutting  
School

Work Experience: Illinois Power Company

12/80 - Present Repairman (see job description)

Other Experience: U.S. Navy

1974 - 1980 Machinist Mate in the U.S. Navy Nuclear propulsion  
program responsible for the operation and maintenance of a naval nuclear propulsion plant's mechanical systems.

Repairman #7

Citizenship: U.S.A.

Age: 30

Formal Education: High School

Training: U.S. Navy Schools:  
Machinists Mate "A" School  
Navy Nuclear Power School  
Prototype Training Alw Idaho  
Hagen Control System Training - San Diego

Work Experience: Illinois Power Company  
8/4/80 - Present Repairman (see job description)

Other Experience: U.S. Navy  
2/76 - 6/4/80 U.S.S. Bainbridge Engine Room Leading Petty Officer (E-6). Supervise preventive maintenance and repairs of all mechanical equipment. Qualified to operate all watchstations through Engine Room Supervisor.



Repairman #8

Citizenship: U.S.A.

Age: 28

Formal Education: High School

Presently attending Richland Community College

Training:

- 1973 Machinist Mate "A" School
- 1974 Navy Nuclear Power School
- 1974 Nuclear Prototype Training
- 1975 Welding & Brazing
- 1975 8000 GPD Evaporator School
- 1976 High Pressure Air Compressor School
- 1978 Engineering Chemist School
- 1978 Rigging School

Work Experience: Illinois Power Company

10/20/80 - Present Repairman (see job description)

Other Experience: U.S. Navy

5/77 - 10/80      Engineering Watch Supervisor, 'M' Div. LPO,  
                         Training Coordinator, S3G NPTU Ballston  
                         Spa N.Y.

2/75 - 5/77      Engine Room Supervisor, USS A. Jackson  
                         SSGN619(G)

Repairman #9

Citizenship: U.S.A.

Age: 27

Formal Education: High School

Training: U.S. Navy MM 'A' School - Nov. 72 - Feb. 73  
Navy Nuclear Power School - June, 1973 - Dec. 1973  
Navy Nuclear Prototype - Jan. 1974 - July, 1974  
Steam Plant Automatic Controls Maintenance School  
(Hagen) - Nov. 1974 - Dec. 1974

Work Experience: Illinois Power Company  
4/1/81 - Present Repairman (see job description)

Other Experience: U.S. Navy  
1972 - 1981 Nuclear Machinist Mate. Three years years  
operational experience as Engine Room Supervisor.  
Three years maintenance on four operational  
Nuclear Prototypes. Responsible for operation  
and maintenance of nuclear propulsion plant  
mechanical systems.

Repairman #10

Citizenship: U.S.A.

Age: 22

Formal Education: High School

Florida Central College - Radiation Protection  
courses

Western Michigan University - Business Adminis-  
tration courses

Training: 1979 - Hobart School of Welding Technology -  
Advanced welding courses. Pipefitters Union  
gas line Installer and apprentice welder.  
1980 completed journeyman Installer. Two  
years welding apprentice left due to new job.

Work Experience: Illinois Power Company

6/81 - Present Repairman (see job description)

Other Experience: 1981 - Ben More Farms, Farm equipment operator  
and maintenance man

1980 - Sub Surface Construction Company,  
"Journeyman Installer and Apprentice  
Welder"

1979 - Collsate Construction Company, "Journeyman  
Installer and Apprentice Welder"

1977 - Comstock Construction Company, Blueprint  
and Cable work for Q.C. department

Repairman #11

Citizenship: U.S.A.

Age: 24

Formal Education: High School  
University of Hawaii - 3 semesters

Training: U.S. Navy Schools  
Machinist Mate "A" School  
Air Conditioning & Refrigeration Class "C" School  
Centrifugal Air Conditioning Operator & Maintenance  
Correspondence courses on Basic Electricity  
Distilling Plant Operator & Maintenance  
Fairbanks & Morse Emergency Diesel Operator

Work Experience: Illinois Power Company  
5/26/81 - Present Repairman (see job description)

Other Experience: U.S. Navy

1977 - 1981 Assigned to a fossil fuel surface ship. Operated and maintained the ship's main engine and auxiliary steam plant. Supervised the personnel of watch stations for the safety and operation requirements. Maintained the systems in casualty situations to insure the ship's safety and mobility.

Repairman #12

Citizenship: U.S.A.

Age: 28

Formal Education: High School

Training: 1971 - Navy Machinist Mate "A" School  
1971 - Navy Nuclear Power School  
1972 - Navy Nuclear Prototype Training  
1974 - Navy Machine Tool Operator School  
1974 - Navy Diesel Maintenance School  
1976 - Navy Air Conditioning & Refrigeration School

Work Experience: Illinois Power Company  
7/80 - Present Repairman (see job description)

Other Experience: U.S. Navy  
7/71 - 6/80 Machinist Mate Chief (E-7) in the Nuclear Submarine Program. Operated and performed maintenance on all reactor system mechanical components and auxiliaries. Qualified engineering watch supervisor and nuclear repair coordinator.

Assistant Supervisor EC & I #1

Citizenship: U.S.A.

Age: 40

Formal Education: General Education Diploma

Training: Electrical Apprenticeship (4 years)

1980 - General Electric Nuclear Instrumentation,  
5 weeks

1981 - General Electric Alterex Excitation  
System, 3 days

1980 - General Electric Process Instrumentation  
& Control, 4 weeks

Work Experience: Illinois Power Company:

1/7/80 - Present Assistant Supervisor, Electrical, Control &  
Instrumentation - (See job description)

1/75 - 1/80 IP - Electrician - Maintenance of power plant  
electrical equipment.

Other Experience:

5/62 - 1/75 Olin Co. - Electrician - Maintenance of  
industrial plant electrical equipment.

Electrical Foreman #1

Citizenship: U.S.A.

Age: 32

Formal Education: High School

1981 - A.A.S., Supervision of Personnel,  
Richland Community College

Training: 1968 - Construction Electrician Class 'A',  
14 weeks

1971 - Nuc Pwr Plt OPER, 52 weeks

1974 - Construction Electrician Class 'B',  
16 weeks

1979 - Bell & Howell Electronics Correspondence  
Course, "Digital Electronics"

1981 - General Electric Alterex Excitation  
System, 3 days

Work Experience: Illinois Power Company:

7/18/77 - Present Electrical Foreman - (See job description)

Other Experience: U.S. Navy

5/68 - 5/77 U.S.N. - Construction Electrician - General  
construction electrical maintenance & distribution  
and Electrical Technician for small nuclear  
power plants.



Electrician #1

Citizenship: U.S.A

Age: 30

Formal Education: High School

Training: 1971 - Basic Electricity & Electronics,  
4 weeks

1971 - Interior Communications Electrician  
Class A, 18 weeks

1971 - Nuc Pwr School, 22 weeks

1972 - Navy Nuclear Prototype Training

1974 - Noise Measurement, 2 weeks

1979 - Bell & Howell Electronics Correspondence  
Course "Digital Electronics"

1981 - General Electric, Alterex Excitation  
Sys, 3 days

Work Experience: Illinois Power Company:

10/3/77 - Present Electrician - (See job description)

Other Experience: U.S. Navy

9/70 - 9/77 U.S.N. Electrician in the Nuclear Propulsion  
program, qualified as Electrical Plant  
operator, operated and maintained shipboard  
electrical equipment.

Electrician #2

Citizenship: U.S.A.

Age: 29

Formal Education: High School

Training: Communication & Relay Center Equipment  
Repairman, 32 weeks, 1971

Work Experience: Illinois Power Company:

6/30/80 - Present Electrician - (See job description)

Other Experience:

8/78 - 5/80 ALLEN Electric Inc; Electrical Repair  
Technician - maintain general industrial  
electrical equipment.

4/71 - 4/78 USAF - Communication Maintenance Technician -  
Install, maintain and test electronic and  
electro-magnet teletype equipment

Electrician #3

Citizenship: U.S.A.

Age: 29

Formal Education: High School

Training: 1974 - Basic Electricity & Electronics, 4 weeks  
1974 - Interior Communications Electrician Class A,  
18 weeks  
1974 - Nuc Pwr School, 22 weeks  
1975 - Navy Nuclear Prototype training

Work Experience: Illinois Power Company:

5/1/80 - Present Electrician - (See job description)

Other Experience: U.S. Navy

10/73 - 10/79 U.S.N. - Electrician in Nuclear Program -  
Qualified Electrical Plant Operator -  
Operated & maintained shipboard electrical  
equipment

Electrician #4

Citizenship: U.S.A.

Age: 43

Formal Education: High School

A.A.S., Electronics, Richland Community  
College, 1980

Training: 1957 - Electrician Mate Class 'A', 14 weeks  
1961 - Electrician Mate Class 'B', 30 weeks  
1972 - Advance Transistor Theory, 3 weeks

Work Experience: Illinois Power Company:

9/2/80 - Present Electrician - (See job description)

Other Experience:

10/76 - 7/80 WAGNER CASTING - Electrician - General  
industrial electrical maintenance

9/56 - 9/76 U.S. Navy - Electrician - Maintained shipboard  
electrical equipment which included motors,  
batteries, controllers and various control  
systems.

Electrician #5

Citizenship: U.S.A.

Age: 34

Formal Education: High School Graduate

A.A. degree, Clinton Community College,  
(Iowa) - 1977

Training: 1968 - Basic Electricity & Electronics, 6 weeks  
1968 - Electricians Mate, Class 'A', 14 weeks  
1968 - Nuclear Power School, 22 weeks  
1969 - Navy Nuclear Prototype Training  
1970 - Noise Measurement, 2 weeks  
1974 - Electricians Mate, Class 'B', 28 weeks  
1978 - Leadership & Management, 2 weeks

Work Experience: Illinois Power Company:

5/12/80 - Present Electricians - (See job description)

Other Experience: U.S. Navy

2/68 - 4/80 U.S. Navy - Electrician in Nuclear Program -  
Qualified as Engineering Watch Supervisor -  
operated and maintained shipboard electrical  
equipment

Electrician #6

Citizenship: U.S.A.

Age: 55

Formal Education: High School

Training: None

Work Experience: Illinois Power Company:

4/20/80 - Present Electrician - (See job description)

Other Experience:

6/79 - 4/80 MATSCO - Test Engineer - Relay checkout & testing

6/69 - 6/79 IP - Relay Specialist - Relay testing & checkout

4/67 - 2/69 Self Employed - Heating & Ventilation

4/48 - 4/67 IP - Electrician - Maintenance at power plant electrical equipment

Maintenance Inspector #1

Citizenship: U.S.A.

Age: 43

Formal Education: AA Degree in General Science  
Pensacola J.C., Pensacola, Florida - 1973

Training: NDT School U.S. Navy - 1969  
Radiographic Safety Officer Course - 1976  
Radiation Protection Officer School - 1980

Work Experience: Illinois Power Company  
8/4/80 - Present Maintenance Inspector (see job description)

Other Experience:  
1969 - 1980 USN NDT Examiner: Supervised Level I & II  
NDT personnel. Conducted exams and performed  
QA Audits, Interfaced between Management and  
Nuclear Regulatory Commission. Supervised all  
radiography performed.

Professional  
Associations: American Society of Non Destructive Testing



Assistant Shift Supervisor #1

Citizenship: U.S.A.

Age: 32

Formal Education: High School

University of Illinois - Shift Technical  
Advisor Program

Training: U.S. Navy Schools:

Machinist Mate "A" School

Naval Nuclear Power School

Naval Nuclear Prototype Training

Naval Nuclear Engineering Laboratory Technician  
School

Clinton Power Station Licensed Operator Training  
Program

Work Experience: Illinois Power Company

12/79 - Present Assistant Shift Supervisor (see job description)

8/78 - 12/79 Control Operator (see job description)

Other Experience: U.S. Navy

1970 - 1978 Engineering Laboratory Technician in the U.S. Navy  
Nuclear Propulsion Program responsible for Nuclear  
power plant chemistry controls, radiological con-  
trols, mechanical system operation and maintenance.

Assistant Shift Supervisor #2

Citizenship: U.S.A.

Age: 37

Formal Education: High School

University of Illinois - Shift Technical  
Advisor Program

Training: Navy Electronics A School

Navy Nuclear Power School, Navy Nuclear  
Prototype Training Unit

Capital Radio Engineering Institute,  
Correspondence Course, Nuclear Instruments

Clinton Power Station Licensed Operator  
Training Program

Work Experience: Illinois Power Company

1979 - Present Assistant Shift Supervisor (see job description)

1978 - 1979 Control Room Operator (see job description)

Other Experience: U.S. Navy

1966 - 1978 Qualified Reactor Operator on Navy nuclear  
submarines, Engineering Watch Supervisor and  
Engineering Officer of the watch. Performed  
as Technical Assistant to Project Officer for  
Naval Reactors Field Office of U.S. ERDA.

Served as Naval Reactors Representative on  
Engineering Officer of the watch qualification  
boards at a Naval Nuclear Prototype.

Assistant Shift Supervisor #3

Citizenship: U.S.A.

Age: 29

Formal Education: High School

University of Illinois - Shift Technical  
Advisor Program

Training: U.S. Navy Schools:

Interior Communications "A" School

Naval Nuclear Power School

Naval Nuclear Prototype Training

Clinton Power Station Licensed Operator  
Training Program

Work Experience: Illinois Power Company

2/81 - Present Assistant Shift Supervisor (see job description)

3/78 - 2/81 Control Room Operator (see job description)

Other Experience: U.S. Navy

2/71 - 2/78 Electrical Operator in the U.S. Navy Nuclear  
Propulsion Program responsible for operation  
and maintenance of shipboard electrical equipment.

Assistant Shift Supervisor #4

Citizenship: U.S.A.

Age: 29

Formal Education: High School

University of Illinois - Shift Technical  
Advisor Program

Training: U.S. Navy Schools:

Electronics Technician A School (1972)

Navy Nuclear Power School & Prototype  
Training (1973)

Clinton Power Station Operator Training  
Program (1978 - Present)

Work Experience: Illinois Power Company

1980 - Present Assistant Shift Supervisor (see job description)

1978 - 1980 Control Room Operator (see job description)

Other Experience: U.S. Navy

1971 - 1978 Electronics Technician in the U.S. Navy Nuclear  
Propulsion Program responsible for operation and  
maintenance of reactor control systems. Qualified  
as a reactor operator. Includes two years exper-  
ience as an instructor of nuclear operator candi-  
dates.

Assistant Shift Supervisor #5

Citizenship: U.S.A.

Age: 33

Previous  
NRC Licenses: NRC RO license for Three Mile Island Unit Two

Formal Education: University of Illinois - Shift Technical  
Advisor Program

Sangamon State University (1 year) -  
Math/Computer Science

Training: U.S. Navy  
Interior Communications "A" School  
Navy Nuclear Power School  
Navy Nuclear Prototype Training  
Three Mile Island Unit Two Licensed Operator  
Training Program  
Clinton Power Station Licensed Operator Training

Work Experience: Illinois Power Company  
6/78 - Present Assistant Shift Supervisor (see job description)

Other Experience:

1/74 - 6/78 Three Mile Island, Control Room Operator  
Supervised other operators during the startup  
and testing of Unit 2; also conducted many of  
the startup tests. Auxiliary operator on TMI  
Unit 1 performing system testing.

1968 - 1974 U.S. Navy - Nuclear Propulsion Program  
Responsible for operation and maintenance of the  
nuclear propulsion plant electrical equipment.

Control Room Supervisor #1

Citizenship: U.S.A.

Age: 31

Formal Education: High School

University of Illinois - Shift Technical  
Advisor Program

Training: U.S. Navy Schools

MMA School

Naval Nuclear Power School

Naval Nuclear Prototype Training

Naval Engineering Laboratory Technician School

Navy Diesel Engine School

Clinton Power Station Licensed Operator  
Training Program

Work Experience: Illinois Power Company

2/9/81 - Present Control Room Supervisor (see job description)

6/78 - 2/81 Control Room Operator (see job description)

Other Experience: U.S. Navy

6/71 - 5/77 U.S. Navy Nuclear Power Program - qualified as  
Engineer Supervisor and Leading Engineering  
Laboratory Technician on 2 different submarines.  
4 years operator experience. Responsible for  
nuclear power plant chemistry controls, radio-  
logical controls, mechanical system operation  
and maintenance.

Control Room Supervisor #2

Citizenship: U.S.A.

Age: 28

Formal Education: High School  
University of Illinois -  
Shift Technical Advisor Program

Training: 1971 - Navy Electronics "A" School  
1971 - Navy Nuclear Power School  
1972 - Nuclear Prototype Training  
Clinton Power Station Licensed Operator  
Training Program

Work Experience: Illinois Power Company  
2/9/81 - Present Control Room Supervisor (see job description)  
4/10/78 - 2/8/81 Control Room Operator (see job description)

Other Experience: U.S. Navy  
1970 - 1970 Electronics Technician in the U.S. Navy Nuclear  
Propulsion Program responsible for operation  
and maintenance of reactor control systems.  
Qualified as a reactor operator. Includes two  
years as an instructor of nuclear operator  
candidates.



Control Room Supervisor #3

Citizenship: U.S.A.

Age: 24

Formal Education: High School

University of Illinois - Shift Technical  
Advisor Program

Training: U.S. Navy Schools:

Electronics "A" School

Naval Nuclear Power School

Naval Nuclear Prototype Training

Clinton Power Station Licensed Operator  
Training Program

Work Experience: Illinois Power Company

7/10/81 - Present Control Room Supervisor (see job description)

1/15/79 - 2/9/81 Control Room Operator (see job description)

Other Experience: U.S. Navy

8/74 - 12/78 Electronics Technician in the U.S. Navy Nuclear  
Propulsion Program responsible for operation and  
maintenance of reactor control systems. Qualified  
as a reactor operator.

Control Room Supervisor #4

Citizenship: U.S.A.

Age: 30

Formal Education: High School

Richland Community College, Decatur, IL

University of Illinois - Shift Technical  
Advisor Program

Training: U.S. Navy Schools:

Nuclear Power School

Nuclear Prototype Training

Interior Communications "A" School

Interior Communications "C" School

Clinton Power Station License Operator  
Training

Work Experience: Illinois Power Company

2/81 - Present Control Room Supervisor (see job description)

3/78 - 2/81 Control Room Operator (see job description)

Other Experience: U.S. Navy

1970 - 1978 Nuclear Power Program: qualified Electrical  
Operator, Reactor Operator and Engineering  
Watch Supervisor responsible for operation  
of nuclear propulsion plant electrical and  
reactor control systems; and responsible for  
supervision of nuclear power plant operators.

Control Room Operator #1

Citizenship: U.S.A.

Age: 27

Formal Education: High School

Training: Navy Schools:

Machinist's Mate "A" School

Nuclear Power School

Nuclear Prototype Training Unit

Air Conditioning & Refrigeration

Work Experience: Illinois Power Company

7/81 - Present Control Room Operator (see job description)

Other Experience: U.S. Navy

1972 - 1981 Machinist Mate in the U.S. Navy Nuclear Propulsion Program responsible for operation and maintenance of nuclear reactor mechanical systems.

Control Room Operator #2

Citizenship: U.S.A.

Age: 29

Formal Education: High School

1970 - 1973 University of Oklahoma,  
Norman, Oklahoma

1980 Associate Degree, Mohegan Community College,  
Norwich, Connecticut

Training: U.S. Navy

Electronics "A" School

Naval Nuclear Power School

Naval Nuclear Prototype Training

Clinton Power Station Licensed Operator  
Training Program

Work Experience: Illinois Power Company

1980 - Present Control Room Operator (see job description)

Other Experience: U.S. Navy

12/74 - 12/80 Electronics Technician in the U.S. Navy Nuclear  
Propulsion Program responsible for operation and  
maintenance of reactor control systems. Qualified  
as a reactor operator. This includes two years as  
an instructor of nuclear operator candidates.

Control Room Operator #3

Citizenship: U.S.A.

Age: 29

Formal Education: High School

Training: Navy Schools:  
Machinist Mate 'A' School  
Nuclear Power School  
Nuclear Prototype Training

Work Experience: Illinois Power Company  
6/8/81 - Present Control Room Operator (see job description)

Other Experience: U.S. Navy  
8/72 - 11/74 Machinist Mate in the U.S. Navy Nuclear  
Propulsion Program responsible for operation  
and maintenance of nuclear reactor mechanical  
systems.

Control Room Operator #4

Citizenship: U.S.A.

Age: 24

Formal Education: High School

Training: Navy Schools:  
Machinist Mate "A" School  
Nuclear Power School  
Nuclear Prototype Training

Work Experience: Illinois Power Company  
6/1/81 - Present Control Room Operator (see job description)

Other Experience: U.S. Navy  
5/75 - 5/81 Machinist Mate in the U.S. Navy Nuclear  
Propulsion Program responsible for operation  
and maintenance of nuclear reactor mechanical  
systems.

Control Room Operator #5

Citizenship: U.S.A.

Age: 29

Formal Education: High School

Training: USN - ET "A" School

USN - Nuclear Power School

USN - Nuclear Prototype Training

Clinton Power Station Licensed Operator  
Training Program

Work Experience: Illinois Power Company

8/28/78 - Present Control Room Operator (see job description)

Other Experience: U.S. Navy

1972 - 1978 Electronics Technician in the U.S. Navy  
Nuclear Propulsion Program responsible for  
operation and maintenance of reactor control  
systems. Qualified as a reactor operator.



Control Room Operator #6

Citizenship: U.S.A.

Age: 26

Formal Education: High School

Training: Navy Schools:

Machinist Mate "A" School

Naval Nuclear Power School

Naval Nuclear Prototype Training

Air Conditioning and Refrigeration School

Air Compressor Maintenance & Repair

Work Experience: Illinois Power Company

5/1/81 - Present Control Room Operator (see job description)

Other Experience: U.S. Navy

1973 - 1981

Machinist Mate 1st Class in Nuclear Surface Program, assigned to 3 different ships. Two were precommissioning units, participated in initial core load, cold & hot plant testing, initial criticality, power range testing and sea trials. Assigned duties as Shift/Divisional Leading P.O., Shift Mechanical Tech. Asst., Divisional Technical Asst., Work Center Supervisor, Drill Monitor, Engineerroom Supervisor and Maintenance Supervisor.

Control Room Operator #7

Citizenship: U.S.A.

Age: 24

Formal Education: High School

Training: U.S. Navy Schools  
Machinist Mate Class "A" School  
Navy Nuclear Power School  
Navy Nuclear Prototype Training

Work Experience: Illinois Power Company  
7/81 - Present Control Room Operator (see job description)

Other Experience: U.S. Navy  
4/75 - 4/81 Machinist Mate in the U.S. Navy Nuclear  
Propulsion Program responsible for operation  
and maintenance of nuclear reactor mechanical  
systems.

Control Room Operator #8

Citizenship: U.S.A.

Age: 26

Formal Education: High School

Training: U.S. Navy Schools:  
Machinist Mate Class "A" School  
Navy Nuclear Power School  
Navy Nuclear Prototype Training

Work Experience: Illinois Power Company  
1981 - Present Control Room Operator (see job description)

Other Experience: U.S. Navy  
1975 - 1981 Navy Nuclear Machinist Mate in the nuclear submarine program, responsible for operation and maintenance of reactor mechanical systems.

Control Room Operator #9

Citizenship: U.S.A.

Age: 33

Formal Education: High School

University of Illinois -  
Shift Technical Advisor

Training: U.S. Navy Schools:  
Machinist Mate Class "A" School  
Navy Nuclear Power School  
Navy Nuclear Prototype Training  
Clinton Power Station Licensed Operator  
Training Program

Work Experience: Illinois Power Company

11/79 - Present Control Room Operator (see job description)

Other Experience: U.S. Navy

2/67 - 11/79 Machinist Mate in the U.S. Navy Nuclear  
Propulsion Program responsible for operation  
and maintenance of nuclear reactor mechanical  
systems.

Control Room Operator #10

Citizenship: U.S.A.

Age: 25

Formal Education: High School

One Year Mechanical Engineering at  
Blackhawk College in Moline, IL

Training: U.S. Navy Schools:

Machinist Mate Class "A" School

Navy Nuclear Power School

Navy Nuclear Prototype Training

Work Experience: Illinois Power Company

6/8/81 - Present Control Room Operator (see job description)

Other Experience: U.S. Navy

1975 - 1981

Machinist Mate in the U.S. Navy Nuclear  
Propulsion Program responsible for operation  
and maintenance of nuclear reactor mechanical  
systems.

Control Room Operator #11

Citizenship: U.S.A.

Age: 24

Formal Education: High School

Training: U.S. Navy Machinist Mate Class "A" School  
U.S. Navy Nuclear Power School  
U.S. Navy Nuclear Prototype Training

Work Experience: Illinois Power Company  
5/18/81 - Present Control Room Operator (see job description)

Other Experience: U.S. Navy  
4/7/75 - 4/7/81 U.S. Navy Machinist Mate 1st Class responsible  
for operation and maintenance of nuclear reactor  
mechanical systems.

Control Room Operator #12

Citizenship: U.S.A.

Age: 29

Formal Education: High School

Attended Rock Valley College, Rockford  
for one year

Training:

Navy Schools:

Electrician Mate "A" School

Naval Nuclear Power School

Naval Nuclear Prototype Training

Work Experience:

Illinois Power Company

5/11/81 - Present

Control Room Operator (see job description)

Other Experience:

U.S. Navy

1972 - 1981

Electrician Mate in the U.S. Navy Nuclear  
Propulsion Program responsible for operation  
and maintenance of nuclear reactor electrical  
systems.



Control Room Operator #13

Citizenship: U.S.A.

Age: 26

Formal Education: High School

Training: U.S. Navy Schools:  
Machinist's Mate 'A' School  
Nuclear Power School  
Nuclear Prototype Training  
Prototype Instructor Training  
Steam Plant Components Maintenance  
Quality Assurance School

Work Experience: Illinois Power Company  
6/17/81 - Present Control Room Operator (see job description)

Other Experience: U.S. Navy  
1971 - 1980 Machinist Mate in the U.S. Navy Nuclear Propulsion Program responsible for operation and maintenance of nuclear propulsion mechanical systems. This includes 6 years as an instructor of nuclear operator candidates.

Control Room Operator #14

Citizenship: U.S.A.

Age: 31

Formal Education: High School

1968 - 1970 San Jacinto College - General Studies

1970 - 1971 University of Houston - Business

Training: U.S. Navy Schools:

Electrician Mate "A" School

Navy Nuclear Prototype Training

Clinton Power Station Licensed Operator  
Training Course

Work Experience: Illinois Power Company

1979 - Present Control Room Operator (see job description)

Other Experience: U.S. Navy

1972 - 1978 Electrician Mate in U.S. Navy Nuclear Propulsion  
Program responsible for operation and maintenance  
of nuclear reactor electrical systems.

Control Room Operator #15

Citizenship: U.S.A.

Age: 30

Formal Education: High School

Associate Degree in Electronic Tehnology  
from ITT Technical Institute, Indianapolis,  
Indiana

Training: Navy Schools:

Machinist Mate "A" School

Navy Nuclear Power School

Navy Nuclear Prototype Training

Clinton Power Station Licensed Operator  
Training Program

Work Experience: Illinois Power Company

11/78 - Present Control Room Operator (see job description)

Other Experience: U.S. Navy

1972 - 1978 Machinist Mate in the U.S. Navy Nuclear  
Propulsion Program responsible for operation  
and maintenance of nuclear reactor mechanical  
systems.

Control Room Operator #16

Citizenship: U.S.A.

Age: 28

Formal Education: High School

Western Illinois University - 1 year  
General Studies

Training: Navy Schools:

Machinist Mate "A" School

Navy Nuclear Power School

Navy Nuclear Prototype Training

Work Experience: Illinois Power Company

3/20/81 - Present Control Room Operator (see job description)

Other Experience: U.S. Navy

1972 - 1981 Machinist Mate U.S.N. in the Nuclear Propulsion  
Program responsible for operation and maintenance  
of nuclear reactor mechanical systems.

Control Room Operator #17

Citizenship: U.S.A.

Age: 32

Formal Education: B.S. Degree - State University of New York

Training: U.S. Navy Schools:  
Electronics "A" School  
Nuclear Power School  
Nuclear Prototype Training  
QA Course - Submarines  
Advanced Transistor Course  
Electronics Technician "B" School

Work Experience: Illinois Power Company  
7/81 - Present Control Room Operator (see job description)

Other Experience:  
5/71 - 5/79 Electronics Technician in the U.S. Navy  
Nuclear Propulsion Program responsible for  
operation and maintenance of nuclear reactor  
control systems. Qualified as a reactor  
operator.

1966 - 1971 AVCO RESEARCH & DEVELOPMENT CORPORATION  
As engineering analyst aide, concurrently  
attended Engineering School and served in  
Army Reserve Unit. Computer programming,  
Data Reduction, and graph preparation.

Control Room Operator #18

Citizenship: U.S.A.

Age: 26

Formal Education: High School

Training: Navy Schools:  
Electronics Technician "A" School  
Naval Nuclear Power School  
Naval Nuclear Prototype Training  
Electronic Test Equipment School  
Basic Digital Fundamentals  
Clinton Power Station License Operator  
Training Program

Work Experience: Illinois Power Company

9/22/80 - Present Control Room Operator (see job description)

Other Experience: U.S. Navy

8/74 - 8/80 Reactor Operator Instrumentation and Control  
Technician, maintained and operated reactor  
control systems.

Control Room Operator #19

Citizenship: U.S.A.

Age: 30

Formal Education: High School

University of Illinois - Shift Technical  
Advisor Program

Training: Navy Schools:

Electrician Mate "A" School

Electrician Mate "B" School

Navy Nuclear Power School

Navy Nuclear Prototype Training

Clinton Power Station Licensed Training  
Program

Work Experience: Illinois Power Company

1980 - Present Control Room Operator (see job description)

1978 - 1980 Nuclear Project Staff (see job description)

Other Experience: U.S. Navy

1969 - 1977 Electrician Mate in the U.S. Navy Nuclear  
Propulsion Program responsible for operation  
and maintenance of the nuclear propulsion  
plant electrical equipment.



Control Room Operator #20

Citizenship: U.S.A.

Age: 26

Formal Education: High School

Training: Navy Schools:  
Electrician Mate "A" School  
Navy Nuclear Power School  
Navy Nuclear Prototype Training

Work Experience: Illinois Power Company  
2/81 - Present Control Room Operator (see job description)

Other Experience: U.S. Navy  
1/75 - 12/80 Electrician Mate in the U.S. Navy Nuclear Propulsion Program responsible for operation and maintenance of nuclear propulsion plant electrical systems.

Control Room Operator #21

Citizenship: U.S.A.

Age: 30

Formal Education: High School

University of Illinois - Shift Technical  
Advisor Program

Training: U.S. Navy

Electronics "A" School

Naval Nuclear Power School

Naval Nuclear Prototype Training

Clinton Power Station Licensed Operator  
Training Program

Work Experience: Illinois Power Company

4/2/79 - Present Control Room Operator (see job description)

Other Experience: U.S. Navy

8/74 - 12/78 Electronics Technician in the U.S. Navy  
Nuclear Propulsion Program responsible for  
operation and maintenance of reactor control  
systems. Qualified as a reactor operator.

Control Room Operator #22

Citizenship: U.S.A.

Age: 27

Formal Education: High School

Training: U.S. Navy Nuclear Power School  
Naval Nuclear Prototype Training  
Interior Communications "A" School  
Clinton Power Station Licensed Operator  
Training Program

Work Experience: Illinois Power Company

3/17/80 - Present Control Room Operator (see job description)

Other Experience: U.S. Navy

3/74 - 3/80 U.S. Navy Nuclear Propulsion Plant Electrical  
Operator responsible for operation and main-  
tenance of shipboard nuclear propulsion plant  
electrical systems.

Control Room Operator #23

Citizenship: U.S.A.

Age: 24

Formal Education: High School

Florence Darlington Technical Institute  
Associate in Engineering Technology  
(Nuclear Engineering) May 31, 1980

Training: U.S. Navy Schools:

Electrician Mate "A" School

Navy Nuclear Power School - 1970

Navy Nuclear Prototype Training - 1971

Work Experience: Illinois Power Company

4/81 - Present Control Room Operator (see job description)

Other Experience:

1/79 - 3/81 Carolina Power & Light

Auxiliary Operator, Robinson Steam and Electric Unit #2 (nuclear). Process make up and waste water, monitor power plant equipment, perform surveillance testing on safety equipment.

7/75 - 10/78 U.S. Navy

Electrician Mate in the U.S. Navy Nuclear Propulsion Program responsible for operation and maintenance of the nuclear propulsion plant electrical equipment.

Assistant Supervisor E C&I #2

Citizenship: U.S.A

Age: 36

Formal Education: High School

Training: 1965 - Electronics Technician Class 'A', 38 weeks

1966 - Nuclear Power School, 22 weeks

1966 - Navy Nuclear Prototype Training

1969 - Electronics Technician Class 'B', 45 weeks

1981 - General Electric Nuclear Instrumentation,  
5 weeks.

Work Experience: Illinois Power Company:

5/19/80 - Present Assistant Supervisor Electrical, Control &  
Instrumentation - (see job description)

Other Experience:

11/65 - 5/80 U.S.N - Electronics Technician in Navy Nuclear  
program; Qualified as Engineering Watch  
Supervisor, Reactor Operator; responsible for  
maintaining & operating Reactor controls equipment.

Control and Instrument Foreman #1

Citizenship: U.S.A

Age: 30

Formal Education: High School

Training: 1970 - Basic Electricity & Electronics, 4 weeks  
1971 - Electronics, Class 'A', 21 weeks  
1971 - Navy Nuclear Pwr School, 22 weeks  
Navy Nuclear Prototype Training  
1976 - Bell and Howell Course, Digital Electronics  
1977 - CREI course, Nuclear Instrumentation and Control  
1981 - General Electric Nuclear Instrumentation, 5 weeks

Work Experience: Illinois Power Company:

6/2/76 - Present Control & Instrument Foreman - (see job description)

Other Experience:

4/70 - 4/76 USN - Electronics Technician in Nuclear Program; Qualified as Reactor Operator - Operated & maintained reactor controls equipment.

Computer Specialist #2

Citizenship: U.S.A.

Age: 29

Formal Education: High School

Training: Electronics Technician "A" School  
Naval Nuclear Power School,  
Naval Nuclear Prototype Training  
Bell and Howell Digital Electronics Course  
Boiling Water Reactor Fundamentals

Work Experience: Illinois Power Company:

5/77 - Present Computer Specialist - (See job description)

Currently on temporary assignment to the CPS Startup Test Group as a Control and Instrumentation test engineer. Past temporary assignments include one year of vendor testing for the CPS control room complex and 9 months startup testing at a fossil power plant.

Other Experience: U.S. Navy

3/71 - 4/77 Electronics Technician in the Naval Nuclear Propulsion Program responsible for operation and maintenance of reactor control equipment. Qualified as a reactor operator.



Computer Specialist #3

Citizenship: U.S.A.

Age: 31

Formal Education: High School

Training: Naval Electronics "A" School  
Basic Nuclear Power School  
Nuclear Prototype Training  
Process Instrument Training (Bailey 7000 controls)  
Devry's Digital Industrial Electronics course  
Honeywell Software Training course  
Z80 Design and Programming course

Work Experience: Illinois Power Company

1976 - Present Computer Specialist (see job description)  
Currently assigned to the CPS Startup Test  
Group performing pre-operational testing of  
control and instrumentation systems.

Other Experience: U.S. Navy

1970 - 1976 Electronics Technician in the Navy Nuclear  
Propulsion Program responsible for operation  
and maintenance of reactor control systems.  
Qualified as a reactor operator.

Computer Specialist #1

Citizenship: U.S.A.

Age: 30

Formal Education: High School

Training: Navy Nuclear Power School  
Naval Nuclear Prototype Training  
Electrician Mate "A" School  
Process Instrumentation Training (including  
Bailey 7000 Controls), 1978  
Honeywell TDC 4500 Processor Maintenance  
School, 1978

Work Experience: Illinois Power Company

8/77 - Present Computer Specialist (see job description)  
Currently on temporary assignment to CPS  
Startup Test Group performing control and  
instrumentation system preoperational tests.

Other Experience: U.S. Navy

1971 - 1977 Electrician Mate in the Navy Nuclear Propulsion  
Program responsible for operation and maintenance  
of nuclear reactor electrical systems.

Control and Instrument Man #1

Citizenship: U.S.A

Age: 27

Formal Education: High School

Training: 1974 - Basic Electricity & Electronics, 3 weeks

1975 - Electronics, Class 'A', 16 weeks

1975 - Inertial Nav - (computers), 19 weeks

Work Experience: Illinois Power Company:

8/1/80 - Present Control & Instrument Man (see job description)

Other Experience:

9/74 - 9/80 U.S. Navy - Electronics technician on Nuclear  
Submarines - Maintained electronic, navigational  
and computerized systems.

Control and Instrument Man #2

Citizenship: U.S.A

Age: 25

Formal Education: High School

Training: 1974 - Basic Electricity & Electronics, 4 weeks  
1975 - Electronics Technician Class 'A', 21 weeks  
1975 - Nuclear Power School, 22 Weeks  
1976 - Naval Nuclear Prototype Training

Work Experience: Illinois Power Company

7/7/80 - Present Control & Instrument Man (see job description)

Other Experience:

6/74 - 6/80 USN Electronics technician in the Nuclear Propulsion Program; Qualified as Reactor Operator - Operated & Maintained Reactor controls equipment.

Control and Instrument Man #3

Citizenship: U.S.A

Age: 29

Formal Education: High School

Training: 1974 - Basic Electricity & Electronics, 4 weeks  
1975 - Electronics Technician Class 'A', 21 weeks  
1975 - Nuclear Power School, 22 weeks.  
1976 - Navy Nuclear Prototype Training  
1981 - Bell & Howell Correspondence Course,  
"Digital Electronics".

Work Experience: Illinois Power Company:

3/10/80 - Present Control & Instrumentation - (see job description)

Other Experience:

5/74 - 2/80 USN Electronics Technician in the Nuclear  
Propulsion Program. Qualified as Reactor  
Operator - Operated and Maintained reactor  
controls equipment.

Control and Instrument Man #4

Citizenship: U.S.A

Age: 25

Formal Education: High School

Training: 1974 - Basic Electricity & Electronics, 4 weeks.

1975 - Electronics Technician Class 'A'

1975 - Nuclear Power School, 22 weeks.

1976 - Navy Nuclear Prototype Training

1978 - Basic Digital Fundamentals, 3 weeks.

Work Experience: Illinois Power Company:

6/23/80 - Present Control & Instrument Man - (see job description)

Other Experience:

1974 - 6/80 USN - Electronics Technician in the Nuclear Propulsion Program; Qualified as Reactor Operator - Operated and Maintained reactor controls equipment.

Control & Instrument Man #5

Citizenship: U.S.A

Age: 28

Formal Education: High School A.S., Charter Oak College,  
Connecticut - 1980.

Training: 1971 - Basic Electricity & Electronics, 4 weeks.  
1971 - Electronics Technician Class 'A', 21 weeks.  
1972 - Nuclear Power School, 22 weeks.  
1972 - Navy Nuclear Prototype Training  
1974 - Advance Transister Theory, 3 weeks.  
1978 - Inertial Nav. (computers), 19 weeks.

Work Experience: Illinois Power Company:

7/31/80 - Present Control & Instrument Man - (see job description)

Other Experience:

11/70 - 7/80 U.S.N Electronics Technician in the Nuclear  
Propulsion Program; Qualified as Reactor  
Operator - Operated & Maintained reactor  
controls equipment.



Control and Instrument Man #6

Citizenship: U.S.A

Age: 26

Formal Education: High School

Training: 1974 - Basic Electricity & Electronics, 4 weeks.  
1975 - Electronics Technician Class 'A', 21 weeks.  
1976 - Nuclear Power School, 22 weeks.  
1976 - Navy Nuclear Prototype Training.  
1981 - GE "Process Instrumentation & Control",  
4 weeks.

Work Experience: Illinois Power Company:

8/11/80 - Present Control & Instrument Man - (see job description)

Other Experience:

8/74 - 7/80 USN - Electronics Technician in the Nuclear  
Propulsion Program; Qualified as Reactor Operator -  
Operated & Maintained reactor controls equipment.

Control and Instrument Man #7

Citizenship: U.S.A

Age: 30

Formal Education: High School

Training: 1971 - Polaris Electronics Class 'A', 26 weeks

1972 - Fire Control Technician (Electronics),  
18 weeks

1974 - Digital Control Computer, 4 weeks

Work Experience: Illinois Power Company:

6/23/80 - Present Control & Instrument Man - (see job description)

Other Experience:

8/71 - 6/80 USN - Fire Control Technician - Maintained  
and operated digital and analog computers &  
inertial navigational equipment.

Control and Instrument Man #9

Citizenship: U.S.A.

Age: 27

Formal Education: High School

Training: 1974 - Basic Electricity & Electronics, 4 weeks  
1975 - Electronics Technician, Class 'A', 21 weeks  
1975 - Nuclear Power School, 22 weeks  
1976 - Navy Nuclear Prototype Training

Work Experience: Illinois Power Company:

5/27/80 - Present Control & Instrumentman - (See job description)

Other Experience: U.S. Navy

5/74 - 4/80 U.S. Navy - Electronics Technician in the  
Nuclear Propulsion Program; qualified as  
Reactor Operator - operated and maintained  
reactor controls equipment.

Control and Instrument Man #8

Citizenship: U.S.A

Age: 35

Formal Education: High School A.S., University of the State of New York - 1978.

Training: 1968 - U.S. Army Nuc Pwr Plt Oper., 52 weeks  
1978 - Bell & Howell Electronics Correspondence Course "Digital Electronics"  
1981 - General Electric Nuclear Instrumentation, 5 weeks

Work Experience: Illinois Power Company:

12/5/77 - Present Control & Instrument Man - (see job description)

Other Experience:

1/77 - 12/77 Nuclear Support Services - Instrument Technician-Maintenance & check out of Nuclear control & Instrumentation.

4/65 - 1/77 U.S. Army - Nuclear Specialist - Operation & Maintenance of Nuclear instrumentation.

Control and Instrument Man #10

Citizenship: U.S.A

Age: 32

Formal Education: High School

Training: 1974 - Basic Electricity & Electronics, 4 weeks  
1975 - Electronics Technician Class 'A', 21 weeks  
1975 - Nuclear Power School, 22 weeks  
1981 - General Electric Process Instrumentation  
& Control, 4 weeks.

Work Experience: Illinois Power Company

10/6/80 - Present Control & Instrument Man - (see job description)

Other Experience:

6/74 - 8/80 USN - Electronics Technician in Nuclear Program;  
Qualified as Reactor Operator - Operated &  
Maintained reactor controls equipment.

Control and Instrument Man #11

Citizenship: U.S.A

Age: 24

Formal Education: High School

Training: 1975 - Basic Electricity & Electronics, 4 weeks  
1975 - Aviation Electricians Mate Class 'A',  
19 weeks.

Work Experience: Illinois Power Company:

1/26/81 - Present Control & Instrument Man - (see job description)

Other Experience:

12/74 - 12/80 USN Aviation Electrician - Maintained, test &  
repair aircraft electrical equipments, control  
& power systems, instrument systems and electronic  
navigational systems.

Supervisor Radwaste #1

Citizenship: U.S.A

Age: 34

Formal Education: High School

Graduated American Television & Electronics  
School 1967 Niles, Ohio (Mech. Eng.)

Attending Richland Community College Decatur, Il.

Training: 1969 - Machinist Mate "A" School Great Lakes, Il.

1970 - Nuclear Power School Bainbridge, Md.

1971 - Nuclear Power Training Unit & ELT  
Training West Milton, N.Y.

Work Experience: Illinois Power Company:

11/80 - Present Supervisor - Radwaste - (See job description)

9/77 - 11/80 Radwaste Operator - (See job description)

Other Experience: 4/69 - 8/77 Navy Nuclear Power Program -  
performed chemical analysis of naval nuclear  
power plant process fluids, performed health  
physicist duties, and performed mechanical  
watchstander duties.



Radiation Protection Shift Supervisor #1

Citizenship: U.S.A.

Age: 30

Formal Education: High School

University of Minnesota - 1 year Electrical Engr.

University of Wisconsin - 1 year Electrical Engr.

Training: Machinist Mate "A" School

Navy Nuclear Power School

Navy Nuclear Prototype Training

Quality Assurance Maintenance Supervision

Instructor Training

BWR-6 Operator Training (observation phase only)

Two months OJT at Salem Nuclear Power Station  
during refueling

Work Experience: Illinois Power Company:

9/77 - Present Radiation Protection Shift Supervisor -  
(See job description)

Currently on temporary assignment to the CPS  
Startup Test Group as Flushing Engineer  
responsible for overall administration of the  
system flushing and hydrostatic test program.

Other Experience: U.S. Navy

1971 - 1977 Engineering Laboratory Technician in the U.S.  
Navy Nuclear Propulsion Program responsible for  
chemistry controls and radiological controls at  
a naval nuclear reactor, and also responsible  
for operation and maintenance of nuclear  
reactor mechanical systems

Radwaste Operator #1

Citizenship: U.S.A.

Age: 28

Formal Education: High School

Augustana College - 1 year pre-engineering

Training: Machinist Mate "A" School

Navy Nuclear Power School

Navy Nuclear Prototype Training

Engineering Laboratory Technician School

Work Experience: Illinois Power Company:

3/80 - Present Radwaste Operator - (See job description)

Currently on temporary assignment at the CPS Startup Test Group assisting in the scheduling and performance of system preoperational testing.

Other Experience: U.S. Navy

1973 - 1980 Engineering Laboratory Technician in the U.S. Navy Nuclear Power Program responsible for chemistry and radiological controls at a naval nuclear reactor, and also responsible for operation and maintenance of nuclear reactor mechanical systems.

Radwaste Operator #2

Citizenship: U.S.A.

Age: 28

Formal Education: High School

Middle Tennessee State University - 2 years  
General Studies

Training: Machinist Mate "A" School

Navy Nuclear Power School

Navy Nuclear Prototype Training

Engineering Laboratory Technician School

Quality Assurance

Diesel Maintenance

Auxiliary Machinery

Capitol Radio Engineering Institute Course in  
Nuclear Engineering Technology

Work Experience: Illinois Power Company:

5/80 - Present Radwaste Operator - (See job description)

Currently on temporary assignment to the CPS  
Startup Test Group performing system preoperational  
tests

Other Experience: U.S. Navy

1972 - 1980

Engineering Laboratory Technician in the  
U.S. Navy Nuclear Propulsion Program responsible  
for chemistry and radiological controls at a  
naval nuclear reactor, and also responsible  
for operation and maintenance on nuclear  
reactor mechanical systems.

Radwaste Operator #3

Citizenship: U.S.A

Age: 30

Formal Education: High School

Training: U.S. Navy Nuclear Power Program (10/70 - 2/72)

Nuclear Power School (10/70 - 5/71)

Prototype Training Nuclear Power Training  
Unit 53G Prototype (6/71 - 11/71)

Engineering Laboratory Technician School  
(11/71 - 2/72)

Work Experience: Illinois Power Company:

2/9/81 - Present Radwaste Operator - (See job description)

Other Experience: U S. Navy

2/25/70 - 2/28/81 Nuclear Trained Machinist's Mate/ Engineering  
Laboratory Technician - Submarine Service:  
performed chemical analysis on reactor coolant,  
performed health physicist duties, and performed  
mechanical watchstander duties at a naval  
propulsion plant.

Radwaste Operator ~~#7~~ #4

Citizenship: U.S.A.

Age: 30

Formal Education: High School

Training: Machinist Mate "A" School  
Naval Nuclear Power School  
Naval Nuclear Prototype Training  
Engineering Laboratory Technician Training

Work Experience: Illinois Power Company:

7/79 - Present Radwaste Operator - (See job description)

Currently on temporary assignment to the CPS  
Startup Test Group specifying, conducting,  
and evaluating system tests.

Other Experience: U.S. Navy

2/70 - 2/76 Engineering Laboratory Technician in the  
Navy Nuclear Propulsion Program responsible for  
chemistry and radiological controls at a naval  
Nuclear reactor. Qualified to operate nuclear  
reactor mechanical systems.

1976 - 1979 Nebraska Public Power District Health Physics  
Technician at Cooper Nuclear Station responsible  
for all radiological controls and plant  
surveys; writing and revising station procedures;  
documentation and associated control for  
radioactive waste shipments; operation of the  
whole body counting program to assess any  
uptake and internal doses.

Radwaste Operator #5

Citizenship: U.S.A

Age: 28

Formal Education: High School

Training: Machinist's Mate "A" School Great Lakes, Il.  
6/71 - 10/71

Naval Nuclear Power School Bainbridge, Md.  
2/72 - 8/72

Naval Nuclear Power Training Unit West Milton, N.Y.  
11/72 - 6/73

Work Experience: Illinois Power Company:

6/81 - Present Radwaste Operator - (See job description)

3/80 - 8/80 Radwaste Operator - (See job description)

Other Experience:

8/80 - 5/81 Logistics Enterprises Corp., Engineering Consultant,  
System Operating Procedure writing & spare parts  
program implementation.

11/70 - 2/80 U.S. Navy, Nuclear Power Plant Mechanical  
Operator

Radwaste Operator #6

Citizenship: U.S.A

Age: 25

Formal Education: High School

Training: Nuclear Power School, Nuclear Power Training  
Unit - U.S. Navy Engineering Laboratory  
Technician School - U.S. Navy

Work Experience: Illinois Power Company:

6/81 - Present Radwaste Operator - (See job description)

Other Experience: U.S. Navy

U.S. Navy nuclear program - performed various  
mechanical watchstander duties on a submarine  
nuclear power plant, performed chemical  
analysis of reactor coolant, and performed  
health physicist duties.



Radchem Specialist

Citizenship: U.S.A

Age: 24

Formal Education: B.S. - Chemistry Emory University Atlanta, Ga.  
(9/75 - 6/79)

Training: U.S. Navy Chemistry Controls Training  
U.S. Navy Chemistry Instrumentation - 1979  
NPDES Permit Monitoring - 1979

Work Experience: Illinois Power Company:

5/81 - Present Radchem Specialist - (See job description)

2/81 - 5/81 Radchem Technician - (See job description)

Other Experience:

7/79 - 2/81 Newport News Shipbuilding and Dry Dock Co.  
Newport News, V.A. Associate Chemist - Water  
chemistry control of Naval nuclear propulsion  
plants, radiation protection, chemical analysis  
of auxiliary systems, Steam generator chemical  
cleaning, plant chemistry recommendations.

Professional Associations: Certificates of Appreciation from Atomic  
Power Division, Newport News Shipbuilding - 1980

RadChem Technician #1

Citizenship: U.S.A

Age: 27

Formal Education: High School

Certificate Tool & Die Design and Drafting - 1973  
Delta Community College Bay City, Mich.

Training: 1975 - U.S. Navy Machinist Mate "A" School

1976 - Nuclear Power School

1976 - AIW Prototype School

Work Experience: Illinois Power Company:

10/80 - Present RadChem Technician - (See job description)

Other Experience: U.S. Navy

3/77 - 9/80 U.S. Navy Engineering Laboratory Technician -  
performed chemical analysis on reactor  
coolant, performed health physicist duties,  
performed mechanical watchstander duties on a  
naval nuclear propulsion plant.

RadChem Technician #2

Citizenship: U.S.A

Age: 25

Formal Education: High School

Presently working on A.S. at Richland  
Community College

Training: 1976 - Navy Nuclear Power School

1976 - Navy Nuclear Power Prototype Training

1977 - Navy Nuclear Power Engineering Laboratory  
Technician School

Work Experience: Illinois Power Company:

1981 - Present RadChem Technician - (See job description)

Other Experience: U.S. Navy

1976 - 1980 Engineering Laboratory Technician in the Navy's  
nuclear submarine program, including 4 years  
experience as an operating technician and as  
Leading Engineering Laboratory Technician  
responsible for supervision of chemistry and  
radiological controls for a naval nuclear  
propulsion plant.

Radchem Technician #3

Citizenship: U.S.A

Age: 30

Formal Education: A.S. in General Science - The University of  
the State of New York, 9/77

Training: U.S. Army Nuclear Power Plant Operator Course -  
Certified as Reactor Operator/Health Physicist  
10/75 - 10/76

Work Experience: Illinois Power Company:

11/5/79 - Present Radchem Technician - (See job description)

Other Experience: RAD Services Inc.

4/79 - 10/79 Senior Health Physics Technician at Salem  
Nuclear Generating Station during refueling  
outage.

10/76 - 4/79 Health Physicist in the Army Nuclear Power  
Program. Served as Staff instructor, Health  
Physicist at a stationary nuclear power  
installation, and as Radiation Control  
Specialist for the Enewetak Atoll Cleanup  
Project.

Professional Associations: Plenary Member, Health Physics Society

Supervisor - Chemistry #1

Citizenship: U.S.A

Age: 32

Formal Education: Diploma, Delsea Regional H.S. (1966); B.A., Natural Science, Covenant College (1974); Electricity and Magnetism, Theory of Radiation Shielding, U. of Tennessee at Chattanooga (1970); Fortran IV, Illinois Valley Community College (1975); Basic, Richland Community College (1979)

Training: 1977 - BWR Chemistry, General Electric  
1979 - BWR 6 Design Familiarization, General Physics  
1979 - BOP Technology, Illinois Power  
1979 - Large Steam Turbine - Generators, General Electric

Work Experience: Illinois Power Company:

1981 - Present Supervisor - Chemistry - (See job description)

1977 - 1981 Chemist - Nuclear - (See job description)

1973 - 1977 Chemist (Hennepin Power Station) Supervisor laboratory at fossil plant, water and coal analysis, air & water pollution control.

1971 - 1973 Laboratory Technician (Baldwin Power Station) performed coal and water analysis, operated water treatment systems.

Other Experience:

1980 Worked one month each at Peach Bottom Atomic Power Station, Pilgrim Nuclear Power Station and Vermont Yankee Nuclear Power Station, participating in routine chemistry activities. This work was on the job training while employed by Illinois Power Company.

Professional Associations: Member: American Association for the Advancement of Science, National Space Institute, National Honor Society

Chemist - Nuclear #1

Citizenship: U.S.A

Age: 29

Formal Education: High School

1969 - 1970 Illinois State University  
(Business Admin.)

1977 - Present Richland Community College  
50 hrs. toward (A.S.)

Training: 1972 - Engineering Lab. Technician School  
(Navy)

1971 - 72 Nuclear Power Training Unit (Navy)

1971 - Nuclear Power School (Navy)

1970 - 71 Propulsion Engineering/Machinist  
School (Navy)

Work Experience: Illinois Power Company:

5/18/81 - Present Chemist - Nuclear - (See job description)

10/79 - 5/18/81 RadChem Technician - (See job description)

8/9/77 - 10/79 Nuclear Project Staff - (See job description)

Other Experience: U.S. Navy

1972 - 74 U.S.N., Engineering Lab Tech. & Machinist -  
performed chemical analysis, naval nuclear  
power plant process fluids, performed health  
physicist activities, performed mechanical  
watchstander duties.

1974-77 U.S.N., Leading E.L.T. - responsible for  
supervisory radiological and chemistry  
controls for a naval nuclear propulsion plant.

Exhibit K  
Interrogatory Nos. 3(a), 3(b) and 3(c)



EXHIBIT K

Quality Assurance Employees  
Illinois Power Company

Budnick, A.J. (Allen)

Date of Employment: 9/30/74

Date of Termination or Transfer: NA

Qualifications:

BSCE-1965/MSME-1972 - Nuclear Eng.,  
Hydrodynamics, Plant Design/Fund.  
Course, Reactor Training, Fuel  
Outage-Quad Cities - 1967-74 Officer  
Nuclear Navy - 1974-76 Supervisor  
of Nuclear Operations, 1976-79 Asst.  
Nuclear Plant Manager, 1979-Present  
Director-Quality Assurance

Bell, G.W. (Glenn)

Date of Employment: 7/19/76

Date of Termination or Transfer: NA

Qualifications:

1957-67 Various Nuclear Navy Training  
Schools, including prototype, reactor,  
radiological controls - Honeywell  
Computer, Operations Training  
Brunswick, NRPD Workshop, Lead Auditor  
Training - 1959-75 Nuclear Navy,  
1975-76 Logistics Planner, 1976-78  
Nuclear Projects Specialist, 1978-79  
Quality Control Coordinator, 1979-80  
Quality Control Supervisor, 1980  
Present Audit Coordinator

Ennen, D.J. (Donald)

Date of Employment: 7/1/77

Date of Termination or Transfer: NA

Qualifications:

BSE[ME]-1975 - 1965-71 various Nuclear  
Navy Training Schools, Nuclear  
Engineering Course, Certification  
QA Lead Auditor - 1968-71 Nuclear  
Reactor Operator/Tech, 1976-77 Nuclear  
Power Engineer, 1977-80 Maintenance  
Planner, 1980-80 Station QA Engineer,  
1980-Present Supervisor-Engineering  
QA

Hollon, M.C. (Maurice)

Date of Employment: 7/20/78

Date of Termination or Transfer: NA

Qualifications:

1960-75 Various Nuclear Navy Training  
Programs, including QA Supervisors  
Course, Engineering Lab Tech Training,  
Nuclear Power School Operator  
Training - 1962-78 Positions in  
Nuclear Navy, 1978-80 Quality  
Assurance Specialist, 1980-80 Station  
QA Specialist, 1980-80 Supervisor  
Plant Operations-QA, 1980-Present  
Supervisor-Construction QA

D'Haem, M.E. (Michael)

Date of Employment: 11/20/78  
Date of Termination or Transfer: 12/28/79  
Date of Reemployment: 4/21/81  
Date of Termination or Transfer: NA

Qualifications:

1961-70 Various Nuclear Navy  
Training Programs, including  
Radiographic Safety Officer Course,  
1974-Audit Tech for QA Effectiveness,  
QA/Nondestructive Examiner Course,  
Eddy Current Testing, Theory,  
Practice - 1964-73 Positions in  
Nuclear Navy, 1974-75 QA  
Administrator, 1975-75 Project  
Manager, 1975-76 Ast. Mechanical  
Maint. Supervisor, 1976-77 QA  
Engineer, 1977-78 Senior QA Engineer,  
1978-79 QA Specialist, 1979-81 QC  
Manager, 1981-Present Supervisor  
Plant Operations QA

J.B. Comiskey (John)

Date of Employment: 11/2/73  
Date of Termination or Transfer: NA

Qualifications:

BSME-1957 - 1958-72 Various training  
courses, including welding metallurgy,  
nondestructive testing, 1974 Nuclear  
Engineering, 1975 X-Ray Interpretation,  
1977 Nuclear Metallurgy, 1978 QA  
Design for Access/Inservice Inspection  
of Nuclear Power Plants - Industrial  
Engineering, Nondestructive Engineering,  
1965-70 Develop./Quality Engineer, 1970  
71 Procurement Quality Engineer, 1971-73  
Welding Engineer, 1973-76 Engineer (QA),  
1976-80 Station Design Eng., 1980-Present,  
Special Processes Engineer/Level III  
Examiner.

Everly, P.D. (Paul)

Date of Employment: 5/22/78  
Date of Termination or Transfer: 8/18/78  
Date of Reemployment: 1/15/79  
Date of Termination or Transfer: NA

Qualifications:

BSCE-1978 - 1979-81 Engineer (QA),  
1981-Present QA Engineer

Durbecq, M.E. (Maurice)

Date of Employment: 1/13/81  
Date of Termination or Transfer: NA

Qualifications:

ASME-1968 - 1966-76 Various courses,  
including QC Statistics, QC  
Engineering; Certification-Nuclear  
QA Auditing and Nuclear QA Engineering  
1954-68 Mechanical Metrology  
Inspector, QA Tech & QC Engineer,  
1968-70 QA Engineer/Chief Mechanical  
Inspector, 1970-73 QC Manager, 1973-81  
QA Engineer, 1981-Present QA Specialist

Weber, R.D. (Roger)

Date of Employment: 6/1/79  
Date of Termination or Transfer: NA

Qualifications:

BS Structural Engineer-1977  
1977-79 QA Inspector, 1979-81  
Engineer (QA), 1981-Present QA  
Engineer

Kaar, J.B. (Jeffrey)

Date of Employment: 5/5/80

Date of Termination or Transfer: NA

Qualifications:

BS Structural Engineer-1980  
1980-Present Engineer (QA)

Morgenstern, R.W. (Roger)

Date of Employment: 6/30/80

Date of Termination or Transfer: NA

Qualifications:

BSCE-1975 - 1975-80 Various Nuclear  
Navy Schools, including Nuclear Plant  
Operations/Engineering 1975-80 Navy  
Officer, 1980-81 QA Engineer, 1981-  
Present Station QA Engineer

Lasswell, C.J. (Clyde)

Date of Employment: 5/5/80

Date of Termination or Transfer: 5/29/81

Qualifications:

Nondestructive Exam: Ultrasonics,  
Industrial Radiography, Magnetic  
Particle/Liquid Penetrant, Precision  
Measurements in Ind. - Welding  
Training, Rules for Inservice  
Inspection of Nuclear Power Plant  
Components, ASME, B&P.V. Codes,  
Section II, NDT in Nuclear Power  
Industry, Certification-O-A Lead  
Auditor - 1968-72 Electric Prod.  
Engineer, 1972-73 Technician, 1973-78  
Nondestructive Examiner/QA Engineer,  
1978-79 Sr. Develop. Engineer, 1979-80  
QC Welding Engineer, 1980-80 QA Specialist

Folck, R.W. (Randolph)

Date of Employment: 5/7/79

Date of Termination or Transfer: NA

Qualifications:

BS Political Science-1974 - 1980  
Certification-QA Lead Auditor  
1973-76 Lab Supervisor, 1976-79 Site  
Supervisor, 1979-81 QA Specialist,  
1981-Present Station QA Specialist

Sprague, J.R. (Jeffrey)

Date of Employment: 6/6/77

Date of Termination or Transfer: NA

Qualifications:

1971-73 Various Nuclear Navy Schools  
1977 Refueling Outage-Vermont Yankee  
Plant - 1973-77 Mechanical Operator,  
Leading ELT & Engineering Lab Tech  
1977-80 RadChem Tech, 1980-Present  
QA Specialist

Spivey, J.E. (James)

Date of Employment: 2/2/81

Date of Termination or Transfer: NA

Qualifications:

1962-77 Various Nuclear Navy Training  
Schools - 1970-73 Navy Instructor,  
1973-76 Electric Division Chief,  
EWS & Engineer Leading CPO, 1976-78  
Electric Division Leading CPO/EWS,  
1978-81 Career Counselor, 1981  
Present QA Specialist

Backen, R.J. (Roger)

Date of Employment: 5/2/77

Date of Termination or Transfer: NA

Qualifications:

Various Nuclear Navy Schools, including  
Welding School 1968-72 Leading Welder,  
Qualified Engineroom Supv. & Reactor  
Operator, 1972-74 Tech. Asst. (Construc-  
tion), 1974-77 Certified Welder, 1977-78  
General Repairman, 1978-Present  
QA Specialist

Hampton, J.F. (James)

Date of Employment: 1/3/77

Date of Termination or Transfer: 12/15/80  
Transferred

Qualifications:

BS Physics-1965/BSEE-1967 - 1960  
1975 Various Navy Schools, 1978 QA  
Requirements in Nuclear Power Plants,  
1981 Environmental Quality Course  
Electrical Equipment for Nuclear  
Plants - 1977-77 Engineer (QA),  
1977-80 Supervisor-Construction QA,  
1980-Present Supervisor-Compliance

Wilson, D.W. (Doyle)

Date of Employment: 2/5/73

Date of Termination or Transfer: 9/1/80  
Transferred

Qualifications:

BS Engineering Physics-1971/MSNE  
1972 - 1973 Nuclear Power Reactor  
Safety, 1975 Refueling Outage  
Monticello Plant, 1976 BWR-6 Training,  
1976 Reactor Training - 1973-75 Asst.  
Nuclear Engineer, 1975-80 QA Engineer,  
1980-Present Station Design Engineer



Tindill, M.D. (Michael)

Date of Employment: 5/23/77  
Date of Termination or Transfer: 10/13/80  
Transferred

Qualifications:

BSME-1977 - 1977-81 Engineer, 1980-  
Present Generation Engineer

Paris, D.L.

Date of Employment: 2/19/79  
Date of Termination or Transfer: 9/12/80

Qualifications:

BA Physics-1971/BSME-1977 - Various  
courses, including Introduction to  
Nuclear Power - 1974-76 Draftsperson/  
Lab Tech, 1976-79 Marketing, 1979  
80 Engineer

Uaks, R.S. (Robert)

Date of Employment: 9/18/72  
Date of Termination or Transfer: 9/7/79

Qualifications:

BS Economics-1966 - 1966-68 Various  
Nuclear Navy Training Programs,  
including radiation control, basic  
engineering design of nuclear  
submarines, 1976 Concrete for  
Nuclear Application, 1976 BWR-6  
Training - 1968-71 Positions in  
Nuclear Navy, 1971-71 Project Engineer,  
1972-76 QA Engineer, 1976-77 Field  
QA Supervisor, 1977-79 Director-QA

Swartz, S.W. (Steven)

Date of Employment: 6/5/78

Date of Termination or Transfer: 7/15/79

Transferred

Qualifications:

BSME-1978 - 1978-Present Engineer

Kacer, B.F. (Bruce)

Date of Employment: 1/20/69

Date of Termination or Transfer: 9/14/79

Qualifications:

BSCE-1969 - 1976 Concrete for the  
Field Supervisor, 1976 Magnetic  
Particle Testing, 1977 QA  
Construction Management - 1969-72  
Electric/Gas Engineer, 1972-79  
Electrical Engineer, 1979-79  
Station QA Engineer

Pulley, J.R. (John)

Date of Employment: 8/4/69

Date of Termination or Transfer: 5/7/79

Transferred

Qualifications:

BSCE-1969 - 1977 Concrete for Nuclear  
Application-QA/QC, 1978 Nuclear  
Coating Seminar - 1969-72 Asst. Gas  
Engineer, 1972-75 Gas Engineer, 1975-  
76 Corrosion Tech, 1976-79 QA  
Engineer, 1979-Present Supervisor  
Gas Construction

Berry, W.M. (Walter)

Date of Employment: 8/2/76  
Date of Termination or Transfer: 10/23/78  
Transferred

Qualifications:

1950-63 Various engineering courses,  
1976 Magnetic Particle Testing  
1960-62 Associate Engineer, 1962-63  
Group Supervisor, 1963-64 QC Super-  
visor, 1964-70 Design Engineer,  
1970-73 Sr. Engineer-QA, 1973-76  
Consulting QA Engineer, 1976-78 QA  
Engineer, 1978-78 Construction  
Specialist, 1978-80 Supervising  
Construction Engineer, 1980-Present  
Supervisor-Piping Construction

Friend, J.Q. (Jarrett)

Date of Employment: 3/22/76  
Date of Termination or Transfer: 2/17/78

Qualifications:

BSRE-1948 - 1948-70 Staff Engineer,  
1970-72 Consultant, 1972-76 Senior  
Quality Engineer, 1976-78 Engineer-  
Generation Engineering

Meacham, J.M. (John)

Date of Employment: 6/9/75

Date of Termination or Transfer: 7/29/77

Qualifications:

BSME-1970 - 1970-73 Various Nuclear  
Navy Training Programs, including  
QA School, 1975 Nuclear Engineering  
Course, 1976 BWR-6 Training, 1976  
QA Training, 1976 Outage-Duane  
Arnold Plant. 1976 Nuclear Reactor  
Engineering, 1976 Nuclear Concepts,  
1977 Nuclear Metallurgy, 1977 Radio-  
graphic Testing-Level II - 1970-75  
Officer-Nuclear Navy, 1975-77 Mechanical  
QA Engineer

Mehaffey, J.W. (James)

Date of Employment: 6/28/76

Date of Termination or Transfer: 4/28/78

Qualifications:

BS Technology & Management-1975  
1964-71 Various Nuclear Navy  
Schools, including Radiation Pro-  
tection, Engineering Lab Tech, 1972  
Health Physics/Rad Detection Instr.,  
1976 Radiographic Interpretation,  
1976 Magnetic Particle Test - 1965-71  
Positions in Nuclear Navy, 1971-76  
Principal Rad Safety & Chem Tech

Klingenberg, J.R. (Jon)

Date of Employment: 7/8/80  
Date of Termination or Transfer: 10/13/78  
Qualifications:

BSEE-1970 - 1972 Nuclear Engineering  
course, 1975 Refueling Outage  
Duane Arnold, 1975 BWR-6 Design  
Orientation, 1976 BWR-6 Training,  
1976 Nuclear Reactor Engineering  
1960-64 U.S. Air Force, 1970-72  
Asst. Electrical Engineer, 1972-74  
Electrical Engineer, 1974-77  
Electrical Engineer (QA), 1977-78  
Engineering Specialist

Dillman, R.W. (Robin)

Date of Employment: 12/26/78  
Date of Termination or Transfer: NA  
Qualifications:

BSEE-1978 - 1980 Reliability for  
Electric Power Industry - 1978-81  
Engineer, 1981-Present QA Engineer

Wiggins, T.O. (Timothy)

Date of Employment: 2/3/69  
Date of Termination or Transfer: NA  
Qualifications:

BSEE-1969 - 1969-73 Asst. Engineer-  
Service Area, 1973-78 Engineer-Service  
Area, 1978-81 Subtransmission &  
Distribution Planning Engineer, 1981-  
Present Station QA Engineer

Barcalow, J.C. (John)

Date of Employment: 2/28/72

Date of Termination or Transfer: NA

Qualifications:

BEME-1967/MBA-1972 - 1972-80 Various training programs, including BWR-6 Training Course - 1967-70 Process/Methods Planner, 1970-71 Experimental Engineer, 1972-75 Results Engineer, 1975-76 Electrical Engineer, 1976-80 Planning Engineer, 1980-81 Generation Planning Engineer, 1981-Present Station QA Engineer

Maxwell, D.L. (Donald)

Date of Employment: 7/20/77

Date of Termination or Transfer: 10/28/77

Qualifications:

BS Science-1951 - 1946-53 Army 1961-76 Various training programs, including Management Audits, Electrical Inspection, Mechanical Inspection, Visual Inspection Training Program, Non-destructive Exam, Non-conformance and Corrective Action Program - 1960-62 Test Conductor & Senior Project Engineer, 1962-72 QA Reliability Manager, 1972-74 Staff Consultant, 1974-77 QA Manager, 1977-77 Supervisor-QA

Geier, J.D. (Julius)

Date of Employment: 9/11/72  
Date of Termination or Transfer: 3/11/77  
Transferred

Qualifications:

BSME-1952 - 1973-76 various courses  
including Digital Industrial  
Electronics - 1952-55 General Reactor  
Engineer, 1955-57 U.S. Air Force,  
1957-70 General Reactor Engineer and  
Project Manager, 1970-72 Manager  
Facilities Engineering, 1972-77  
Supervisor-Quality Assurance, 1977-1980  
Manager Generation Engineering,  
1980-Present Manager-Nuclear Station  
Engineering



CERTIFICATE OF SERVICE

I hereby certify that the original of each of the foregoing documents was served upon the following:

Philip L. Willman  
Assistant Attorney General  
Environmental Control Division  
188 West Randolph Street  
Suite 2315  
Chicago, Illinois 60610

that three conformed copies of each of the foregoing documents were filed with the following:

Secretary of the Commission  
United States Nuclear Regulatory Commission  
Washington, D.C. 20555  
Attention: Docketing and Service Branch

and that one copy of each of the foregoing documents was served upon each of the following:

Hugh K. Clark, Esq., Chairman  
P. O. Box 127A  
Kennedyville, Maryland 21645

Dr. George A. Ferguson  
School of Engineering  
Howard University  
2300 Sixth Street, N.W.  
Washington, D.C. 20059

Prairie Alliance  
P. O. Box 2424  
Station A  
Champaign, Illinois 61820

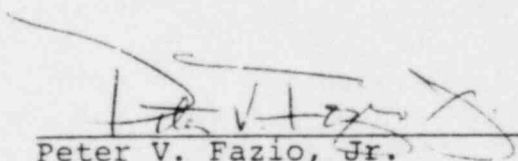
Dr. Oscar H. Paris  
Atomic Safety and Licensing Board  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Executive Legal Director  
United States Nuclear Regulatory Commission  
Washington, D.C. 20555

Atomic Safety and Licensing Board Panel  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Atomic Safety and Licensing  
Appeal Board Panel  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

in each case by deposit in the United States Mail, postage  
prepaid on July 27, 1981.



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Peter V. Fazio, Jr.  
One of the Attorneys for Applicants  
SCHIFF HARDIN & WAITE  
7200 Sears Tower  
233 South Wacker Drive  
Chicago, Illinois 60606  
(312) 876-1000

RELATED CORRESPONDENCE

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

IN THE MATTER OF )  
ILLINOIS POWER COMPANY, )  
SOYLAND POWER COOPERATIVE, INC. )  
and WESTERN ILLINOIS POWER )  
COOPERATIVE, INC. )

Docket Nos. 50-461 OL  
50-462 OL

(Operating Licenses for Clinton )  
Power Station, Units 1 and 2) )

NOTICE

To:

Hugh K. Clark, Esq., Chairman  
P.O. Box 127A  
Kennedyville, Maryland 21645

Dr. George A. Ferguson  
School of Engineering  
Howard University  
2300 Sixth Street, N.W.  
Washington, D.C. 20059

Dr. Oscar H. Paris  
Atomic Safety and Licensing Board  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Executive Legal Director  
United States Nuclear Regulatory Commission  
Washington, D.C. 20555

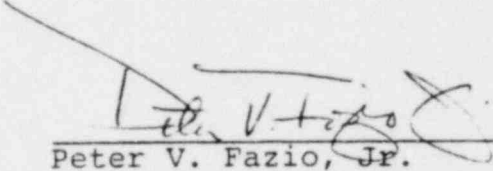
Philip L. Willman  
Assistant Attorney General  
Environmental Control Division  
188 West Randolph Street  
Suite 2315  
Chicago, Illinois 60610

Atomic Safety and Licensing Board Panel  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555



Atomic Safety and Licensing  
Appeal Board Panel  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

PLEASE TAKE NOTICE that I today served upon Prairie Alliance, P.O. Box 2424, Station A, Champaign, Illinois 61820, and have filed with the Secretary of the United States Nuclear Regulatory Commission RESPONSE OF ILLINOIS POWER TO PRAIRIE ALLIANCE'S FIRST ROUND OF DISCOVERY in the above captioned matter. A copy of this document is attached hereto and hereby served upon you.



---

Peter V. Fazio, Jr.  
One of the Attorneys for Applicants  
SCHIFF HARDIN & WAITE  
7200 Sears Tower  
233 South Wacker Drive  
Chicago, Illinois 60606  
(312) 876-1000

Dated: July 27, 1981