

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

IN THE MATTER OF)
ILLINOIS POWER COMPANY,)
SOYLAND POWER COOPERATIVE, INC.) Docket No. 50-461 OL
and WESTERN ILLINOIS POWER)
COOPERATIVE, INC.)
)
(Operating License for Clinton)
Power Station, Unit 1))

RESPONSE OF ILLINOIS POWER TO THE STATE OF
ILLINOIS' SECOND SET OF INTERROGATORIES TO APPLICANTS

Illinois Power Company ("Illinois Power" or "the Company" or "IP"), on behalf of itself, Soyland Power Cooperative, Inc., and Western Illinois Power Cooperative, Inc. (collectively "Applicants"), has objected herein to many of the State of Illinois' ("the State") interrogatories on one or both of the following grounds:

1. The information requested in the interrogatory was provided by Illinois Power in response to the State's First Set of Interrogatories and First Request for Production of Documents. The State has attempted to circumvent the deadline of November 15, 1981, for the close of first round discovery by formulating specific requests for documents or other information previously made available in response to more general first round requests. Illinois Power has fully cooperated with the State in scheduling document

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review sessions and in providing access to its files. The State was given an index to Illinois Power files relating to first round interrogatories and document requests under Contention 2, and attorneys for the State were given unrestricted access to these files. They spent several days reviewing documents related to Contentions 2, 3 and 5. Illinois Power also stood ready to produce documents from its files relating to Contentions 10 and 12, but the State never scheduled a session for review of those documents. Further review of documents contained in files made available in the first round of discovery is now foreclosed by the Board's order of October 29, 1981, approving the parties' Joint Motion for Establishing Discovery Schedule of October 13, 1981.

2. The information requested in the interrogatory is not necessary for the clarification of any response to first round discovery requests. The State has attempted in second round discovery to broaden the scope of first round discovery instead of clarifying information it received in the first round. Under the Joint Motion for Establishing Discovery Schedule, second round discovery was "limited to clarification of matters raised in the first round." The State's requests for information that could have been made in the first round are therefore beyond the scope of second round discovery.

In many cases, however, Illinois Power has provided all or part of the information requested in the interrogatory subject to the objection. The information is provided in the hope that it will resolve the issue and eliminate any perceived need for further discovery efforts. In each case, however, Illinois Power expressly reserves the right to reassert its objection to any additional discovery requests.

[General Interrogatory No. 1: Identify all persons who have assisted in any way in the preparation of each answer to each interrogatory below and describe the substance of each person's assistance.]

ANSWER: This interrogatory is separately answered herein for each contention.

[General Interrogatory No. 2: Identify all documents that were relied upon to provide an answer to each interrogatory below, and describe the substance of each document so used.]

ANSWER: Any documents in Applicants' possession, custody, or control, that were relied on to answer any interrogatory to which no objection is made, will be available for inspection at the offices of Illinois Power.

[General Interrogatory No. 3: Identify all persons whom IP plans to call to testify as to each contention, and state the qualifications of each person so identified.]

ANSWER: Illinois Power has not yet determined which persons it will call as witnesses should a hearing prove necessary.

[General Interrogatory No. 4: Describe for each interrogatory any additional research or work, if any, that IP plans to do that will affect the answer.]

ANSWER: Illinois Power is continuously engaged in monitoring information that may affect the design, construction or operation of CPS. Unless otherwise noted, or unless new information indicates the need for further investigation, Illinois Power does not plan to conduct further research or work which may affect the answers relative to a particular interrogatory.

Contention 2

[General Interrogatory No. 1: Identify all persons who have assisted in any way in the preparation of each answer to each interrogatory below and describe the substance of each person's assistance.]

ANSWER: Illinois Power has objected to each of the State's interrogatories under Contention 2. All information supplied subject to objection was prepared under the supervision and direction of Allen J. Budnick, Director-Quality Assurance.

- [5. Identify the persons who were, but are no longer, employed on the inspection staff of Baldwin Associates' (BA) Department of Quality Control (QC), For each person so identified state:
- a) his qualifications for the position;
 - b) his performance in the position;
 - c) the time period of his employment in the position;
 - d) the substance of any complaints made by him to IP, BA, or NRC about QA/QC program; and
 - e) the reason for termination of employment.]

OBJECTION: Illinois Power objects to Interrogatory No. 5 and each subparagraph thereof on the grounds that the information requested is not necessary for the clarification of any response to first round discovery requests and is therefore beyond the scope of second round discovery. Illinois Power further objects to subparagraph (e) of Interrogatory No. 5 on the grounds set forth in its response to Interrogatory No. 3d of the State's First Set of Interrogatories and in the Answer of Applicants in Opposition to Illinois' Motion to Compel Answers.

ANSWER: The information furnished by Illinois Power in response to Interrogatory No. 3c of the State's First Set of Interrogatories, relating to Illinois Power's QA and QC employees, is set forth in the attached Exhibit A with respect to Baldwin Associate's QC employees.

[6. State how many persons are now employed on the QC inspection staff.]

OBJECTION: Illinois Power objects to Interrogatory No. 6 and each subparagraph thereof on the grounds that the information requested is not necessary for the clarification of any response to first round discovery requests and is therefore beyond the scope of second round discovery.

ANSWER: Eighty-one individuals are presently employed on the Baldwin Associates' QC inspection staff.

[a) State how many of that number are undergoing training to meet the requirements for the position. Describe what training they are receiving.]

ANSWER: Four individuals are undergoing training. The general training description for QC personnel is as follows:

CLASSROOM TRAINING

All Quality Control personnel during training are required to attend specific training sessions as defined by the Training Coordinator and Senior Discipline Engineer. Included in these training sessions are instructions to reference the latest revisions to all applicable documents. An outline of each training session is presented to all new employees for guidance during the training period. Classroom training varies for each individual according to the area the new employee is being trained for.

The training sessions are arranged to supplement on-the-job training the new employee will receive in the field, and with mandatory reading of procedures, codes and standards. A classroom attendance record is kept on each individual to document total man-hours in training. A personnel package of records for each individual to be certified, is established and maintained throughout his or her duration of employment.

ON-THE-JOB TRAINING

It is mandatory for each individual during the training period to accumulate a minimum number of hours performing tests, examinations and inspections. This on-the-job training is documented to provide minimum requirements for each individual on actual firsthand experience performing quality functions.

Training schedules are devised on a week-to-week basis, to judge progress and determine evaluation of performance during the training period. To coincide with the on-the-job training, there are mandatory reading lists. Both generic and specific reading lists accompany the field experience to provide guidance, proficiency and evaluate the capabilities of the individual during training.

[7. State how many persons are now employed in the BA QC Department.]

OBJECTION: Illinois Power objects to Interrogatory No. 7 and each subparagraph thereof on the grounds that the information requested is not necessary to the clarification of any response to first round discovery requests and is therefore beyond the scope of second round discovery.

ANSWER: Ninety-three individuals are presently employed in Baldwin Associates' QC Department.

[a) State how many of that number are undergoing training to meet the requirements for the position. Describe the positions for which they are receiving training and the type of training involved.]

ANSWER: Four individuals are undergoing training. See the Answer to Interrogatory No. 6(a) for a general training description for Q.C. personnel.

[8. Identify those persons who were, but are no longer, employed on the inspection staff of BA's piping department. For each person so identified state:

- a) his qualifications for the position;
- b) his performance in the position;
- c) the time period of his employment in the position;
- d) the substance of any complaints he made to IP, BA, or NRC about the QA/QC program; and
- e) the reason for termination of employment.]

OBJECTION: Illinois Power objects to Interrogatory No. 8 and each subparagraph thereof on the grounds that the infor-

mation requested is not necessary for the clarification of any response to first round discovery requests and is therefore beyond the scope of second round discovery.

Illinois Power further objects to subparagraph (e) of Interrogatory No. 8 on the grounds set forth in its response to Interrogatory No. 3(d) of the State's First Set of Interrogatories and in the Answer of Applicants in Opposition to Illinois' Motion to Compel Answers.

ANSWER: Inspection activities at CPS are performed by Baldwin Associates Quality Control Department. Baldwin Associates Piping Department does not have an inspection staff. See the Answer to Interrogatory No. 5.

[9. Identify those persons who are now employed on the inspection staff of BA's Piping Department. For each person so identified state:]

- a) his duties and responsibilities;
- b) his qualifications for the position; and
- c) the substance of any complaints he has made to IP, BA, or NRC about the QA/QC program.]

OBJECTIONS: Illinois Power objects to Interrogatory No. 9 and each subparagraph thereof on the grounds that the information requested is not necessary for the clarification of any response to first round discovery requests and is therefore beyond the scope of second round discovery.

ANSWER: Inspection activities at CPS are performed by Baldwin Associates Quality Control Department. Baldwin Associates Piping Department does not have an inspection

staff. The information furnished by Illinois Power in response to Interrogatory No. 3c of the State's First Set of Interrogatories, relating to Illinois Power's QA and QC employees, is set forth in the attached Exhibit B with respect to Baldwin Associates QC employees responsible for mechanical inspections.

[10. Identify each person who is now employed in the BA small bore design group. For each person so identified state:

- a) his duties and responsibilities;
- b) his qualifications for the position; and
- c) the substance of any complaints he has made to IP, BA or NRC about the QA/QC program.]

OBJECTION: Illinois Power objects to Interrogatory No. 10 and each subparagraph thereof on the grounds that the information requested is not necessary for the clarification of any response to first round discovery requests and is therefore beyond the scope of second round discovery.

[11. Describe the current QA system for the documentation of procurement and specification requirements.

- a) Describe the changes if any, that IP has made in this system since the issuance of IE Inspection Report 50-461/81-05.
- b) Identify all those persons who are responsible for the changes, if any, that IP has made in this system.
- c) Identify all those persons who are responsible for the management, operation and implementation of this system.]

OBJECTIONS: Illinois Power objects to Interrogatory No. 11 and each subparagraph thereof on the grounds that:

(1) the information requested was provided in response to Interrogatory No. 4 of the State's First Set of Interrogatories, and

(2) the information requested is not necessary for the clarification of any response to first round discovery requests and is therefore beyond the scope of second round discovery. Requests for information concerning Inspection Report 50-461/81-05 are not in clarification of any first round discovery response because the inspection report is a public document which was available to the State on April 21, 1981. Illinois Power responded to the inspection report in a letter dated June 11, 1981, from Leonard J. Koch, Vice President, to Mr. James G. Keppler, Office of Inspection and Enforcement, Region III. This response was also a public document available to the State before submission of first round discovery requests. Any requests for information concerning the inspection report or Illinois Power's response thereto could have been made in the first round of discovery.

ANSWER: Specification requirements that must be met for procured items are passed on to suppliers through procurement documents such as purchase orders, specifications, and contracts. These procurement documents are reviewed to

ensure that appropriate requirements are included. The procurement documents generally require the supplier to submit various types of documentation in conjunction with the item. This documentation may include such things as procedures to be used by the manufacturer, drawings and other design documents, performance test reports, qualification reports, material test reports, certificates of compliance or conformance, and instruction manuals. The procurement documents generally specify where the supplier is to send the specific document and who reviews it for acceptability or approval. When items are received, they are inspected for compliance with procurement document and specification requirements. The documentation submitted by the supplier that attests to the quality of the manufactured items is also reviewed for compliance to procurement and specification requirements.

- [12. Describe the current system of using travelers to detail installation and inspection requirements.
- a) Describe the changes, if any, that IP has made in this system since the issuance of IE Inspection Report 50-461/81-05.
 - b) Identify all those persons who are responsible for the changes, if any, that IP has made in this system.
 - c) Identify all those persons who are responsible for the management, operation and implementation of this system.]

OBJECTION: Illinois Power objects to Interrogatory No. 12 and each subparagraph thereof on the grounds that:

(1) the information requested was provided in response to Interrogatory Nos. 4 and 5 of the State's First Set of Interrogatories, and

(2) the information requested is not necessary for the clarification of any response to first round discovery and is therefore beyond the scope of second round discovery.

ANSWER: "Travelers" used in fabrication and installation include provisions for operation sequence, reporting results of completion of specific operations, and check points for fabrication and installation. Travelers also include spaces for initials or stamps of Baldwin Associates construction and inspection personnel and the Authorized Nuclear Inspector for ASME Code Work.

[13. State the basis for IP's conclusion that the requirement that vendors acquire written authorization from IP, prior to shipment, to substitute a certificate of compliance for missing documentation is unrealistic.]

OBJECTION: Illinois Power objects to Interrogatory No. 13 on the grounds that the information requested is not necessary for the clarification of any response to first round discovery requests and is therefore beyond the scope of second round discovery.

[14. Describe the QA system of document accountability and control that IP believes assures compliance with requirements for issuance of materials and equipment for installation or use at CPS-1.]

OBJECTION: Illinois Power objects to Interrogatory No. 14 on the grounds that:

(1) the information requested was provided in response to Interrogatory No. 4 of the State's First Set of Interrogatories, and

(2) the information requested is not necessary for the clarification of any response to first round discovery and is therefore beyond the scope of second round discovery.

[15. State what IP believes is the purpose of Procedures BA 2.20 and BA 2.3, and describe what procedures IP uses to meet this purpose.]

OBJECTION: Illinois Power objects to Interrogatory No. 15 on the grounds that:

(1) the information requested was provided in response to Interrogatory No. 4 of the State's First Set of Interrogatories, and

(2) the information requested is not necessary for the clarification of any response to first round discovery and is therefore beyond the scope of second round discovery.

[16. Describe the system IP is using to inspect safety-related pipe hangers.]

- a) Describe the changes, if any, that IP has made in this system since the issuance of IE Inspection 50-461/81-05.
- b) State the average maximum time span between hangar installation and QC inspection.
- c) State whether this system requires documentation of who installed the hangar components and when installation was completed.
- d) Identify all those persons who were responsible for the changes, if any, that IP has made in this system.
- e) Identify all those persons who are responsible for the management, operation and implementation of this system.]

OBJECTION: Illinois Power objects to Interrogatory No. 16 and each subparagraph thereof on the grounds that:

(1) the information requested was provided in response to Interrogatory No. 4 of the State's First Set of Interrogatories, and

(2) the information requested is not necessary for the clarification of any response to first round discovery requests and is therefore beyond the scope of second round discovery.

[17. Describe IP's system to ensure that welders are familiar with welding procedures and parameters.

- a) Describe the changes, if any, that IP has made in this system since the issuance of IE Inspection Report 50-461/81-05.
- b) Identify all those persons who were responsible for changes, if any, that IP made in this system.
- c) Identify all those persons who are responsible

for the management, operation and implementation of this system.]

OBJECTION: Illinois Power objects to Interrogatory No. 17 and each subparagraph thereof on the grounds that:

(1) the information requested was provided in response to Interrogatory Nos. 4 and 5 of the State' First Set of Interrogatories, and

(2) the information requested is not necessary for the clarification of any response to first round discovery requests and is therefore beyond the scope of second round discovery.

ANSWER: All welders are tested and certified to weld procedure specifications in accordance with project procedures. After certification, each welder is issued a copy of the "Welding Procedure Specification Handbook" (JV-493) which is controlled in accordance with Project Document Control Procedures. Furthermore, specific weld procedures are available and controlled at various document control centers.

- [18. Describe the record and document control system that IP uses to correlate IP audit findings to the necessary corrective actions.
- a) Describe the changes, if any, that IP has made in this system since the issuance of IE Inspection Report 50-461/81-05.
 - b) Identify all those persons who are responsible for the changes, if any, that IP has made in this system.

- c) Identify all those persons who are responsible for the management, operation and implementation of this system.]

OBJECTION: Illinois Power objects to Interrogatory No. 18 and each subparagraph thereof on the grounds that:

(1) the information requested was provided in response to Interrogatory No. 4 of the State's First Set of Interrogatories, and

(2) the information requested is not necessary for the clarification of any response to first round discovery requests and is therefore beyond the scope of second round discovery.

ANSWER: The method used to correlate corrective actions to Audit Findings is to document the corrective action taken on the respective audit finding form. Furthermore, the Audit Team Leader's evaluation of corrective action and the verification of corrective action is documented on the audit finding form. Upon completion of these actions and formal close-out of the audit finding by the Director-Quality Assurance, the audit findings are filed in the Clinton Power Station Document Records Center.

[19. Describe the system that IP uses to control the time taken between the completion and QA/QC inspection of work.

- a) Describe the changes, if any, that IP has made in this system since the issuance of IE Inspection Report 50-461/81-05.

- b) Identify all those persons who are responsible for the changes, if any, that IP has made in this system.
- c) Identify all those persons who are responsible for the management, operation and implementation of this system.]

OBJECTION: Illinois Power objects to Interrogatory No. 19 and each subparagraph thereof on the grounds that:

(1) the information requested was provided in response to Interrogatory No. 4 of the State's First Set of Interrogatories, and

(2) the information requested is not necessary for the clarification of any response to first round discovery and is therefore beyond the scope of second round discovery.

ANSWER: Traveler systems identify and provide for sequencing of operations during fabrication and installation. Certain operations are required to be completed and inspected prior to proceeding with other operations. These are identified as hold points. Final inspections are accomplished following the completion of all work activities. Construction personnel are required to notify quality control personnel for inspection as required by the procedures and travelers.

[20. State to what extent, if any, construction cost overruns or project delays at CPS-1 have been the result of:

- a) NRC regulatory changes;
- b) NRC policy changes in the field;

- c) BA design errors, miscalculations, oversights, underestimations, or delays;
- d) Sargent and Lundy (S & L) design errors, miscalculations, oversights, underestimations, or delays;
- e) General Electric (GE) design errors, miscalculations, oversights, underestimations and/or delays; and
- f) IP design errors, miscalculations, oversights, underestimations and/or delays.]

OBJECTION: Illinois Power objects to Interrogatory No. 20 and each subparagraph thereof on the grounds that:

(1) the information requested is not necessary for the clarification of any response to first round discovery requests and is therefore beyond the scope of second round discovery, and

(2) the request is too vague to allow formulation of a response.

[21. Identify all NRC documents, known to IP, specifically calling into question the judgment, experience, capability or commitment to quality of IP regarding the construction or proposed operation of CPS-1.]

[22. Identify all S & L, BA, or GE documents, known to IP, specifically calling into question the judgment, experience, capability or commitment to quality of IP regarding the construction or proposed operation of CPS-1.]

[23. State whether IP has any knowledge of any IP, BA or S&L employee resigning his position or otherwise being terminated on account of disagreement or dissatisfaction with the quality of construction or engineering work, or management

decisions or policies relating to the construction or proposed operation of CPS-1 and, if so, identify documents or otherwise provide details pertaining to any such occurrences.]

[24. State whether IP has any knowledge of any IP, BA or S&L employee lodging a complaint with IP concerning disagreement or dissatisfaction with the quality of construction or engineering work, or decisions or policies relating to the construction or proposed operation of CPS-1, which complaint did not result in the resignation or termination of that employee, and, if so, identify documents or otherwise provide details pertaining to any such occurrences.]

OBJECTION: Illinois Power objects to Interrogatory Nos. 21-24 on the grounds that:

(1) the information requested is not necessary for the clarification of any response to first round discovery requests and is therefore beyond the scope of second round discovery, and

(2) the requests are too vague to allow formulation of a response.

Contention 3

[General Interrogatory No. 1: Identify all persons who have assisted in any way in the preparation of each answer to each interrogatory below and describe the substance of each person's assistance.]

ANSWER: Robert L. McPherron, Supervisor-Planning.

[25. State whether IP has done an independent study of the tasks and costs involved in decommissioning CPS-1, and if not, whether IP plans to do so, and when.]

ANSWER: Illinois Power has initiated an independent review by Whitman Requardt and Associates of the expected costs involved in decommissioning Unit 1.

[26. Why is immediate dismantlement the "assumed method" for decommissioning CPS-1?]

ANSWER: The immediate dismantlement method of decommissioning has been used for planning purposes because:

- 1) It is estimated to be less costly than the passive storage with deferred dismantlement method.
- 2) It allows unrestricted use of the site after shutdown and decommissioning is completed.

[27. State whether IP has studied or commissioned any studies of alternatives to the immediate dismantlement method of decommissioning CPS-1 and, if so, summarize the results of those studies in terms of the tasks and costs involved.]

ANSWER: IP has studied for planning purposes the passive safe storage with deferred dismantlement method of decommissioning. The estimated costs of decommissioning CPS Unit 1 using this method in 1978 constant dollars are:

- 1) Preparation for safe storage - \$12.6 million.
- 2) Annual continuing care - \$80,000 per year
- 3) Deferred dismantlement - \$37 million (Dismantled 10 to 30 years after shutdown)

[28. State what plans, if any, IP has for use of CPS-1 site after decommissioning.]

OBJECTIONS: Illinois Power objects to Interrogatory No. 28 on the grounds that the information requested is not necessary for the clarification of any response to first round discovery requests.

ANSWER: IP has no specific plans at this time for use of the site after decommissioning.

[29. State whether IP has made plans or provisions for funding the costs involved in decommissioning CPS-1, and, if so, specify those plans or provisions.]

OBJECTIONS: Illinois Power objects to Interrogatory No. 29 on the grounds that the information requested is not necessary for the clarification of any response to first round discovery and is therefore beyond the scope of second round discovery.

ANSWER: Illinois Power has made no specific plans for funding the costs involved in decommissioning CPS-1.

[30. To what extent, if any, have the costs of decommissioning CPS-1 been included in any of IP's rate requests to the Illinois Commerce Commission to date?]

OBJECTION: Illinois Power objects to Interrogatory No. 30 on the grounds that the information requested is not necessary for the clarification of any response to first round discovery and is therefore beyond the scope of second round discovery.

ANSWER: Decommissioning costs have not been included in rate requests to the Illinois Commerce Commission.

[31. Specify what plans or provisions IP has made, if any, to finance any further construction cost increases, not already accounted for, that may occur at CPS-1.]

OBJECTION: Illinois Power objects to Interrogatory No. 31 on the grounds that the information requested is not necessary for the clarification of any response to first round discovery and is therefore beyond the scope of second round discovery.

ANSWER: Illinois Power's credit standing and reputation in the financial community will enable it to use the most advantageous financing available, whether short, intermediate, or long term; public or private, domestic or foreign, to meet any unforeseen contingencies.

[32. Specify what plans or provisions IP has made, if any, to finance the decommissioning of CPS-1, once in operation, in the event of a major (TMI-2) accident.]

OBJECTION: Illinois Power objects to Interrogatory No. 32 on the grounds that the information requested is not necessary for the clarification of any response to first round discovery and is therefore beyond the scope of second round discovery.

ANSWER: See the Answer to Interrogatory No. 31. In addition, Illinois Power has or will have insurance coverage as follows:

1. Physical Damage Coverage to Plant and Equipment, including Decontamination Coverage. Illinois Power will have in effect the maximum insurance coverage available when nuclear fuel arrives at the plant site. Currently, \$450 million is the maximum coverage available. However, it is anticipated that by the end of 1981 one and possibly two additional insurance programs will be offering additional limits to bring total coverage available up to \$1 billion.

2. Extra Expense Coverage. Illinois Power will purchase the maximum insurance available to cover the increased cost of purchasing replacement power in the event of direct physical loss or radioactive contamination to the plant. Currently, the maximum coverage available provides for a limit of \$2.3 million per week for 52 weeks and \$1.15 million per week for the next 52 weeks, for a maximum coverage of \$179.4 million. The coverage would not be effective until after the first 26 weeks of an outage.

3. Liability Coverage After Nuclear Fuel is Loaded in Reactor. Illinois Power will purchase the maximum insurance coverage available, which is currently \$160 million.

[33. Specify what plans or provisions IP has made, if any, to finance repairs and/or decommissioning of CPS-1 once in operation, in the event of an

accident or malfunction causing the shutdown of CPS-1 for six months or more, or permanently.]

OBJECTION: Illinois Power objects to Interrogatory No. 33 on the grounds that the information requested is not necessary for the clarification of any response to first round discovery and is therefore beyond the scope of second round discovery.

ANSWER: See the Answer to Interrogatory No. 32.

[34. State the assumed capacity factors for each of the first ten (10) years of operation of CPS-1.]

OBJECTION: Illinois Power objects to Interrogatory No. 34 on the grounds that the information requested is not necessary for the clarification of any response to first round discovery and is therefore beyond the scope of second round discovery.

Contention 10

[General Interrogatory No. 1: Identify all persons who have assisted in any way in the preparation of each answer to each interrogatory below and describe the substance of each person's assistance.]

ANSWER: The Answers to all interrogatories relating to Contention 10 were prepared under the supervision and direction of Julius Geier, Manager - Nuclear Station Engineering.

[35. Describe in detail how IP plans to test the pressure differential of the low pressure core spray (LPCS) of the ECCS during operation of CPS-1]

OBJECTION: Illinois Power objects to Interrogatory No. 35 on the grounds that the information requested is not necessary for the clarification of any response to first round discovery and is therefore beyond the scope of second round discovery.

ANSWER: As a condition of its operating license, Illinois Power is required to demonstrate the ability of the Low Pressure Core Spray (LPCS) system to deliver rated performance while the remainder of the plant is performing normally. A full-flow test line allows the LPCS to take suction from the suppression pool and return flow to the pool without affecting other plant operations.

A throttle valve in the test line allows the plant operator to control pump flow and discharge pressure. Installed instruments provide pump flow and pressure data.

[36. Describe in detail how IP plans to test the flow rate of the LPCS of the ECCS during operation of CPS-1.]

OBJECTION: Illinois Power objects to Interrogatory No. 36 on the grounds that the information requested is not necessary for the clarification of any response to first round discovery and is therefore beyond the scope of second round discovery.

ANSWER: See the Answer to Interrogatory No. 35.

[37. Describe in detail how IP plans to test the pressure differential of the high-pressure core spray (HPCS) of the ECCS during operation of CPS-1.]

OBJECTION: Illinois Power objects to Interrogatory No. 37 on the grounds that the information requested is not necessary for the clarification of any response to first round discovery and is therefore beyond the scope of second round discovery.

ANSWER: The High Pressure Core Spray (HPCS) pump is tested in the same manner as the LPCS pump except that the suction source is usually the condensate storage tank. Flow returns to the condensate storage tank via a full flow test line which contains two throttle valves in series. The same general procedure is followed, and the same type of data is taken. The HPCS data are compared with the technical specification to verify that the pump meets or exceeds its functional requirements.

[38. Describe in detail how IP plans to test the flow rate of the HPCS of the ECCS during operation of CPS-1.]

OBJECTION: Illinois Power objects to Interrogatory No. 38 on the grounds that the information requested is not necessary for the clarification of any response to first round discovery and is therefore beyond the scope of second round discovery.

ANSWER: See the Answer to Interrogatory No. 37.

[39. Has IP or its suppliers tested or measured the core spray sparger of the ECCS to determine the nozzle angles and individual bundle flows? If so, describe the method of testing or measurement used and the results. If not, state whether any test or measurement will be performed, when it will be performed, and what method of test or measurement will be used.]

OBJECTION: Illinois Power objects to Interrogatory No. 39 on the grounds that the information requested is not necessary for the clarification of any response to first round discovery and is therefore beyond the scope of second round discovery.

ANSWER: General Electric has tested the core spray design applicable in establishing nozzle functional criteria. These tests have determined spray characteristics of single nozzles and interaction affects of multiple nozzle operation in both steam and air environments. These tests have been used to determine a set of nozzle configuration criteria capable of yielding acceptable flow rates to each fuel bundle for a particular core size.

[40. Explain the basis for IP's conclusion that the worst single failure/break type combination is the HPCS line break of approximately 0.02 feet² and the failure of the LPCS diesel generator that powers one LPCS pump and one low-pressure coolant injection (LPCI) pump.]

[41. Explain the basis for IP's conclusion that the worst single failure/break type combination, referred to above in Interrogatory 40, will yield the highest peak cladding temperature of approximately 2085° F of all cases affected by LPCI diversion at 10 minutes.]

- [42. Does a change in the reduction factors for averaging cladding strain affect this conclusion? Explain what affect a change in this factor will have.]
- [43. Does a change in the reduction factor of 2.8 for fuel bundle interior rods affect this conclusion? Explain what affect a change in this factor will have.]
- [44. Does a change in the reduction factor of 4.1 for fuel bundle peripheral rods affect this conclusion? Explain what affect a change in this factor will have.]

OBJECTION: Illinois Power objects to Interrogatory Nos. 40-44 on the grounds that the information requested is not necessary for the clarification of any response to first round discovery and is therefore beyond the scope of second round discovery.

- [45. State the basis for IP's conclusion that the GE model is conservative in comparison to the models described in NUREG 0620 within the range applicable to BWRs.
- a) Describe specifically what range is applicable to BWRs.
 - b) Identify all documents of communication between IP and NRC regarding the GE model.
 - c) Identify all documents of communication between IP and GE regarding the GE model.]

OBJECTION: Illinois Power objects to Interrogatory No. 45 and each subpart thereof on the grounds that the information requested was provided in the response to Interrogatory No. 46.d of the State's First Set of Interrogatories.

[46. Describe the additional sensitivity studies GE has agreed with NRC to perform.

- a) State whether these studies were completed by the end of July 1981, and if not, when they are scheduled for completion.
- b) Describe what action IP plans to take in response to the results of these studies.

OBJECTION: Illinois Power objects to Interrogatory No. 46 on the grounds that the information requested was provided in response to Interrogatory No. 46.d of the State's First Set of Interrogatories.

ANSWER: The studies were completed in October, 1981. No actions are required in response to the results of these studies.

[47. State whether IP or its suppliers inspected or examined the core spray spargers prior to installation at CPS-1 for the purpose of identifying any cracking. If so, described the methods and results of this examination or inspection.]

OBJECTION: Illinois Power objects to Interrogatory No. 47 on the grounds that the information requested is not necessary for the clarification of any response to first round discovery and is therefore beyond the scope of second round discovery.

ANSWER: The core spray spargers are examined during and after fabrication in accordance with GE specifications and a Product Quality Certification is issued. Upon receipt of the core spray spargers, which are now part of the top guide assembly, visual inspection of the shipping crate

and contents is made by the Clinton Power Station constructor to verify that there was no damage during shipment. The Clinton Power Station constructor then issues a General Receiving Report. The above two documents verify the condition of the contents prior to installation at Clinton Power Station 1.

[48. State whether IP intends to inspect or examine the core spray spargers during operation of COS-1 for the purpose of identifying any cracking. If so, describe this method of inspection or examination.]

OBJECTION: Illinois Power objects to Interrogatory No. 48 on the grounds that the information requested is not necessary for the clarification of any response to first round discovery and is therefore beyond the scope of second round discovery.

ANSWER: Illinois Power intends to inspect or examine the core spray spargers during operation of Clinton Power Station 1 for the purpose of identifying any cracking in accordance with its regular inspection program.

[49. Describe in detail how the operation of the ECCS has been verified for worst-case, design-basis accident conditions.

- a) State whether this verification has been achieved by actual, operational tests, and if not, why not.
- b) Identify all documents used in support of IP's answer.]

OBJECTIONS: Illinois Power objects to Interrogatory No. 49 and each subparagraph thereof on the grounds that:

(1) the information requested was provided in response to Interrogatory No. 46.d of the State's First Set of Interrogatories, and

(2) the information requested is not necessary for the clarification of any response to first round discovery requests and is therefore beyond the scope of second round discovery.

ANSWER: The performance of the ECCS during a loss of coolant accident (LOCA) including the worst case, design basis accident is determined through the application of a series of evaluation models. These evaluation models have been design verified and are approved by the NRC. During the course of model development, the physical phenomena affecting the ECCS performance have been extensively studied in a series of tests. The results of these tests have been used to verify the accuracy and conservatisms in the evaluation models. In addition, overall integrated system tests using the two loop test apparatus (TLTA) have been performed in order to demonstrate the ability of the ECCS to adequately cool the core even under worst-case, design basis accident conditions.

[50. Describe in detail how the operation of the ECCS has been verified for worst-case, anticipated transient without scram conditions.

- [a) State whether this verification has been achieved by actual, operational tests, and, if not, why not.]
- b) Identify all documents used in support of IP's answer.]

OBJECTIONS: Illinois Power objects to Interrogatory No. 50 on the grounds that:

(1) the information requested was provided in response to Interrogatory No. 46.d of the State's First Set of Interrogatories, and

(2) the information requested is not necessary for the clarification of any response to first round discovery requests and is therefore beyond the scope of second round discovery.

[51. Describe the classification of the automatic depressurization system (ADS). In addition, state whether:

- a) The ADS is safety-grade;
- b) The ADS is classified as important to safety; and
- c) The relief valves and their controls and instruments, which are used in conjunction with ADS, are classified as safety-grade.]

OBJECTION: Illinois Power objects to Interrogatory No. 51 on the grounds that the information requested is not necessary for the clarification of any response to first round discovery and is therefore beyond the scope of second round discovery.

Contention 12

[General Interrogatory No. 1: Identify all persons who have assisted in any way in the preparation of each answer to each interrogatory below and describe the substance of each person's assistance.]

ANSWER: The answers to all interrogatories were prepared under the supervision of Larry S. Brodsky, the Assistant Plant Manager of the Clinton Power Station.

[52. Describe the assumptions IP made and the calculations IP performed to conclude that the dose rate exposure at the operator location due to the movement of a fuel assemblies is a few millirem per hour (mrem/hr).]

ANSWER: The assumptions made were as follows: (1) Fuel bundle in the core for 1,000 days of full power, (2) Fuel transfer taking place 24 hours after reactor shutdown from full power operation. The calculations were performed using the shielding computer code ISOSHLD (FSAR 12.3.5-4).

[a) What specific value (in mrem/hr) does IP mean when it states that dose rate exposure is a few mrem/hr?]

ANSWER: The specific dose value is variable between 0.5 and 5 mrem/hr. depending upon the fuel bundle and its location.

[b) What total dose does IP expect during a worst case transfer?]

ANSWER: The total dose to an operator during the "worst case transfer" of a fuel bundle is estimated to be less than 1 mrem.

[c) Identify all documents IP used to answer this interrogatory.]

ANSWER: The document used in these evaluations was the ISOSHLD code.

[53. Describe the assumptions IP made and the calculations IP performed to determine that the dose rates in the accessible areas of the drywell, in the vicinity of the refueling pool bellows, will not exceed 16 mrem/hr.

a) Identify all documents IP used to answer this interrogatory.]

OBJECTION: Illinois Power objects to Interrogatory No. 53 on the grounds that the information requested is not necessary for the clarification of any response to first round discovery and is therefore beyond the scope of second round discovery.

[54. Describe the assumptions IP made and the calculations IP performed to conclude that the contact dose rate on the shielding surrounding the fuel transfer tube is a few mrem/hr.]

ANSWER: The assumptions made were the same as those listed in the Answer to Interrogatory No. 52. The calculations were performed using the shielding computer codes ISOSHLD AND G³ (FSAR References 12.3.5-4, 6).

[a) What specific value (in mrem/hr) does IP mean when it states that dose rate exposure is a few mrem/hr?]

ANSWER: The specific dose value varies between 0.5 and 5 mrem/hr. in the accessible area.

[b) What total dose does IP expect during a worst case transfer?]

ANSWER: The total dose to an operator is estimated to be less than 0.5 mrem during a "worst case" transfer of a fuel bundle.

[c) Identify all documents IP used to answer this interrogatory.]

ANSWER: The documents used in the evaluations were the ISOSHL D and G³ computer codes.

[55. Describe the administrative controls IP will provide to restrict access to the spent fuel transfer system.

a) Identify all documents that describe these administrative controls.]

OBJECTION: Illinois Power objects to Interrogatory No. 53 on the grounds that the information requested is not necessary for the clarification of any response to first round discovery and is therefore beyond the scope of second round discovery.

ANSWER: CPS 10P3702.01 CONTAINMENT/FUEL BUILDING FUEL TRANSFER is the controlling procedure which describes the necessary prerequisites prior to startup of the Inclined Fuel Transfer System (IFTS).

Prerequisites include verification that IFTS maintenance areas are clear of personnel and that shield accesses to these areas are installed and locked, and that keys are under the control of Radiation Protection personnel.

CPS 10P3702.015 ensures that surveillance requirements are completed on the transfer system using a dummy load. This verifies the operability of all protective interlocks and system operation prior to transfer of spent fuel.

Maintenance in the area of the spent fuel transfer tube will be performed under the provisions of a Radiation Work Permit (RWP) per CPS No. OAP1024.02N RADIATION WORK PERMIT. This ensures that all necessary precautions and prerequisites are addressed and that all such maintenance is performed under the cognizance of Radiation Protection personnel and the Shift or Assistant Shift Supervisor.

[56. Explain how the interlocking mechanisms of the spent fuel transfer system works when either one of the hatches is opened during the transfer of a spent fuel load in the carriage from the containment building to the spent fuel storage tank.]

ANSWER: Once fuel is in transit through the tube, the access hatches cannot be opened.

[57. What action does IP plan to take in the event that a spent fuel load becomes stuck in the tube during transfer?]

ANSWER: See the Answer to Interrogatory No. 52(b) of the State's First Set of Interrogatories. Illinois Power will take the necessary steps to correct the malfunction or remove the fuel by manual means.

[a) What maximum dose rate and total exposure to personnel has IP calculated will occur during such an event?]

ANSWER: The maximum dose rate which would exist during such an event is 5 mrem/hr. Exposure will be minimized by limiting the time spent by any individual in the area of the spent fuel transfer tube.

[58. What action does IP plan to take in the event of an equipment malfunction during transfer of a spent fuel load in the tube?]

ANSWER: Equipment would be repaired in accordance with standard operating and repair procedures. Manual operation is possible if automatic operation fails.

[a) What maximum dose rate and total exposure to personnel has IP calculated will occur during such an event?]

ANSWER: See the Answer to Interrogatory No. 57(a).

[59. What other measures does IP plan to take, besides the posting of signs and the use of interlocking mechanisms, to limit access to the spent fuel transfer system during operation?]

OBJECTION: Illinois Power objects to Interrogatory No. 59 on the grounds that the information requested is not necessary for the clarification of any response to first round discovery and is therefore beyond the scope of second round discovery.

ANSWER: See the Answer to Interrogatory No. 55(a).

STATE OF ILLINOIS)
) SS
COUNTY OF MACON)

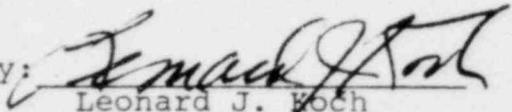
LEONARD J. KOCH, being duly sworn, deposes and says that he is Vice-President of Illinois Power Company, one of the Applicants in the proceeding; that he has read the foregoing Responses of Illinois Power Company to the State of Illinois' Second Set of Interrogatories, and that the same are true and correct to the best of his knowledge, information, and belief.

Leonard J. Koch

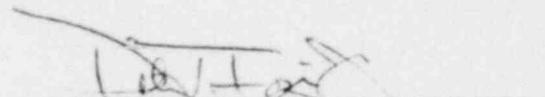
SUBSCRIBED and SWORN to
before me this _____ day
of December, 1981.

Notary Public

ILLINOIS POWER COMPANY

By: 
Leonard J. Koch
Vice President

SIGNED AS TO OBJECTIONS:

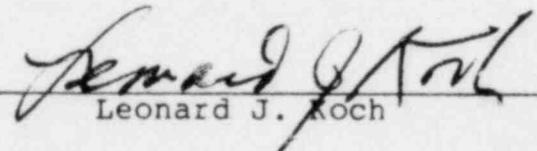

One of the Attorneys for
Applicants

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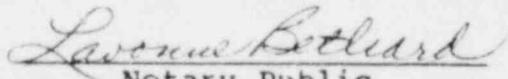
Dated: December 15, 1981

STATE OF ILLINOIS)
) SS
COUNTY OF MACON)

LEONARD J. KOCH, being duly sworn, deposes and says that he is Vice-President of Illinois Power Company, one of the Applicants in the proceeding; that he has read the foregoing Responses of Illinois Power Company to the State of Illinois' Second Set of Interrogatories, and that the same are true and correct to the best of his knowledge, information, and belief.


Leonard J. Koch

SUBSCRIBED and SWORN to
before me this 15th day
of December, 1981.


Notary Public

EXHIBITS

EXHIBIT A

EXHIBIT A

Former Quality Control Employees of Baldwin Associates

<u>Full Name</u> <u>Address</u> <u>Occupation or Position</u>	<u>Level</u>	<u>Certified</u>	<u>Total BA</u> <u>Employment</u>
Randy J. Beeker 802 Tyler Monticello, Il. Vendor Surveillance	II	Certified	59 Months 5/4/77 - 4/24/81
Chris Blenstraub 2313 Anchor Dr. Bloomington, Il. Riping/Mech. Inspt.	II	Certified	12 Months 7/2/79 7/11/80
John Bremm 158 Lori Lynn Decatur, Il. Material Control Inspect.	I	Certified	4 Months 2/11/81 5/27/81
Wayne Broadman 102 S. Monroe Clinton, Il. Electrical Inspector	II	Certified	8 Months 1/7/81 8/11/81
Robby G. Brown 217 Sorrento Dr. Terre Haute, Ind. Riping/Mechanical	I	Certified	3 Months 6/15/81 9/11/81
Dennis Bell R. R. 5 Box 385 Dunnellon, Fla. Civil/Struc. Inspect.	II	Certified	11 Months 6/28/78 5/15/79
Eric Bergamyer R.F.D. 6 Bloomington, Il. C/S	II	Certified	12 Months 8/16/76 9/2/77

<u>Full Name</u> <u>Address</u> <u>Occupation or Position</u>	<u>Level</u>	<u>Certified</u>	<u>Total BA</u> <u>Employment</u>
G. B. Brown P. O. Box 306 Clinton, Il. C/S	III	Certified	34 Months CQ Still employed 7/9/75 5/3/78
Tracy L. Browning 1311 Hersey Road Apt. #8 Bloomington, Il. Electrical TA	N/H	Not Cert.	7 Days 11/16/81 11/23/81
Dave Cordy 307 Westbrook Dr. Mahomer, Il. Electrical Engr.	II	Certified	16 Months CQ 5/5/80 9/16/81
Randy Callison R. R. #2 Farmer City, Il. C/S	I	Certified	15 Months 7/23/76 10/31/77
Joe Cavato 4030 Buckingham Dr. Decatur, J. Material Control	II	Certified	23 Months 8/2/76 7/5/78
Gary Conner Striegel Ct. Normal, Il. Vendor Surveillance	II	Certified	7 Months 4/5/77 10/31/77
Frederick Creamer P. O. Box 871 Clinton, Il. P/M II Electrical I	I II	Certified	43 Months 7/27/77 1/3/78 10/29/79 2/11/81

<u>Full Name</u> <u>Address</u> <u>Occupation of Position</u>	<u>Level</u>	<u>Certified</u>	<u>Total BA</u> <u>Employment</u>
Daniel Cummings 50 Park Lane Clinton, Il. Summer Help	None	No Cert. ?	Summer Help 5/25/78 9/5/78
Myles Denny 03 E. Washington Clinton, Il. N/P	II	Certified	18 Months 3/17/79 1/21/81
Michael P. Evans 515 E. Washington Clinton, IL. P/M	II	Certified	29 Months 6/15/77 12/31/80
Donald "Scott" Foster 6 Hillcrest Clinton, Il. Electrical	II	Certified	5 Months 10/6/80 2/27/81
Douglas Fuller Rt. #7 Kinney, il. Electrical	I	Certified	3 Months 1/29/81 3/3/81
Larry Gasaway 518 S. Isabella Clinton, Il. Electrical	I	Certified	4 Months 1/14/81 5/19/81
Morgan Gassmun, Jr. RR. #2, Box 437 Clinton, Il. P/M Inspector	II	Certified	5 Months 1/5/81 6/16/81
Clifford Gordon 139-15 28th Road Flushing, N.Y.	None	Not Cert.	1 Month 4/20/81 5/29/81

<u>Full Name Address Occupation of Position</u>	<u>Level</u>	<u>Certified</u>	<u>Total BA Employment</u>
Joe Guynn P.O. Box 46 Cisco, Il. P/M	II	Certified	6 Months 3/3/81 9/8/81
James Hall 44 Woodward St. Farmer City, Il. Electrical	None	Not Cert.	1 Month 6/1/81 7/20/81
Ron Halverson 605 S. Center Clinton, Il. P/M	II	Certified	30 Months 6/29/78 12/8/80
James Hannah 5173 Lake Road Geneva, Ohio Vender Surveillance	II	Certified	1 Month 4/13/81 5/1/81
Robert Hilton Apt. #1 Park Motel Clinton, Il. Electrical	I	Certified	8 Months 10/22/80 5/29/81
James Heyen 1542 Adams Dr. Decatur, Il. Electrical	I	Certified	5 Months 5/26/80 9/16/80
Joe Hindmane Box 322 109 S. East Clinton, Il. P/M Coordinator	II	Certified	24 Months 10/19/77 1/9/81

<u>Full Name</u> <u>Address</u> <u>Occupation of Position</u>	<u>Level</u>	<u>Certified</u>	<u>Total BA</u> <u>Employment</u>
John Hinthorn 1919 E. Clay Decatur, Il. Electrical	I Limited II	Certified	6 Months 1/26/81 7/3/81
George S. Hake, Jr. 708 Albert Rill Road Westminister, Md. Electrical	II	Certified	3 Months 7/10/78 10/3/78
Randy Hake 18 E. Julia Clinton, Il. P/M	I	Certified	28 Months 6/20/79 11/3/81
John Hook 40 S. Catherine La Grange, Il. Concrete/Ribar	I	Certified	16 Months 5/16/77 9/21/78
Fred Hauseholder 07 W. Clark Apt. 302 Champaign, Il. Civil/Structural	II	Certified	60 Months 1/5/76 1/30/81
Jerry Jennings P.O. Box 122 Niantic, Il. Electrical	I	Certified	5 Months 5/28/81 10/27/81
John Johnson 1222 Searle Dr. Normal, Il Civil/Structural	II	Certified	31 Months 8/23/78 2/27/81

<u>Full Name</u> <u>Address</u> <u>Occupation of Position</u>	<u>Level</u>	<u>Certified</u>	<u>Total BA</u> <u>Employment</u>
Larry Johnson 60 W. Hickory Point Rd. Decatur, Il. Electrical	I	Certified	28 Months 5/9/77 9/21/79
John Paul Jones RR #1 Vendor Surveillance	II	Certified	45 Months 5/24/76 2/13/81
Clement G. Kamphaus 003 Weaver Drive Urbana, Il.	None	Not Cert.	1 Day 1/26/81
Alan W. Koca Rt. 1 County Lane Ct. Heyworth, Il. P/M	II	Certified	27 Months 8/3/77 11/5/79
Richard A. Kramer 664 Burginer Dr. Decatur, Il. Receiving Inspection	II	Certified	17 Months 11/17/77 1/27/78
Thomas E. La Baw 269 N. Ash	None	Not Cert.	1 Month 3/9/81 4/24/81
Gerald R. Lane 247 N. Wood St. Electrical	II	Certified	14 Months 11/2/78 1/14/81
Ken C. Lapsly 501 N. East 16th Stuart, Fla. C/S	II	Certified	9 Months 10/8/76 7/22/77

<u>Full Name</u> <u>Address</u> <u>Occupation of Position</u>	<u>Level</u>	<u>Certified</u>	<u>Total BA</u> <u>Employment</u>
David Laurindine 220 St. Denis O. La 70122		Not. Cert.	2 Months 3/31/81 6/30/81
W. Layfield RR. #2 Farmer City, Il. Sr. OA Elect.	III	Certified	2 Months 11/13/78 1/24/79
Richy Ledbetter 1912 Trent Street Winston Salem, NC	None	Not Cert.	1 Day 4/3/80
Charles "Robbie" Lord, Jr. 76 S. East St. Clinton, Il. Receiving/Mat. Cont.	II	Certified	31 Months 6/28/78 5/8/81
Clifford Libby, Jr. Folly Pond Road Beverly, Mass. Mat'l Control	III	Certified	26 Months 6/19/74 8/27/76
Calvin Lunny P.O. Box 993 Bay City, Texas P/M	II	Certified	30 Months 10/26/76 4/13/79
Alan W. Lynch 112 S. Jackson Clinton, Il. P/M	I	Certified	10 Months 8/13/80 6/12/81
Richard McCullough 522 W. Green St. Champaign, Il. C/S	II	Certified	13 Months 7/9/79 2/27/81

<u>Full Name</u> <u>Address</u> <u>Occupation of Position</u>	<u>Level</u>	<u>Certified</u>	<u>Total BA</u> <u>Employment</u>
Tim McGuire Mt. Vernon, Il. Electrical	II	Certified	24 Months 1/4/80 12/20/81
Peter McKinna 1706 E. Washington Clinton, Il. P/M	II	Certified	30 Months 5/8/78 11/21/80
Martin Mirritt Box 390, RR. #2 Clinton, Il. P/M	II	Certified	25 Months 4/5/77 3/20/78 9/17/79 9/19/80
Thomas G. Moran 42 Hodgcon Ave. Pittsburg, Pa. P/M	II	Certified	Still Employed 1/23/76 11/77
Tim Morrow RR. #4 Mahomet, Il. P/M	II	Certified	46 Months 3/27/77 11/18/80
Andrew Nielsen 21 Willowdale St. Joseph, Il. C/S	II	Certified	28 Months 2/16/76 6/2/78
Malcolm Norton 05B N. Dianne Lane Nahomet, Il. C/S	I	Certified	6 Months 5/18/81 11/9/81

<u>Full Name Address Occupation of Position</u>	<u>Level</u>	<u>Certified</u>	<u>Total BA Employment</u>
William O'Brien WYE Motel Clinton, Il P/M	III	Certified	7 Months 8/18/80 3/17/81
Donald Patterson RR. #1 Clinton, Il. Civil	I	Certified	27 Months 9/15/76 12/15/78
Scott Piepenbunk Box 30, RR. #1 Waynesville, Il. Electrical	I	Certified	7 Months 1/15/81 7/24/81
Richard Pinca 15 N. Quincy Clinton, Il. Electrical	I	Certified	24 Months 9/19/77 9/7/79
Mark Porter 63 Country Club Road Urbana, Il. Electrical	I	Certified	2 Months 8/24/81 10/16/81
C. M. Powers 109 Washington St. Shreveport, La. Mat'l	III	Certified	15 Months 8/30/76 12/15/77
Larry Prather 24 W. Prairie Ave. Apt. #6 Decatur, Il. Elect & Civil	I II	Certified (Limited)	6 Months 6/11/79 1/7/81

<u>Full Name</u> <u>Address</u> <u>Occupation of Position</u>	<u>Level</u>	<u>Certified</u>	<u>Total BA</u> <u>Employment</u>
Harry Reilong 617 E. Washington Clinton, Il. Calibration	II	Certified	23 Months 4/5/78 10/22/80
Larry Richardson 705 S. Country Club Road Decatur, Il. Calibration	III	Certified	31 Months 7/23/75 2/24/78
Ray J. Roberts 152 B. Granedon St. St. Purce, Fla. Civil	II	Certified	22 Months 10/13/76 1/3/78
Walter Shanks Rt. 4, Box 674 Ouka, Miss. Civil	II	Certified	2 Months 3/2/81 5/7/81
Gary Sharar 905 Marquis St. Clinton, Maryland Mat'l Control	I	Certified	19 Months 4/4/77 11/28/78
Larry Shaw Rt. 4, Box 601-2 Lake of Woods Apts. Nahomet, Il. P/M	II	Certified	4 Months 5/7/79 9/25/79
William Shinnoman 235 Illinois Box 38 De Lan, Il. Elect.	II	Certified	18 Months 1/23/80 6/30/81

<u>Full Name</u> <u>Address</u> <u>Occupation of Position</u>	<u>Level</u>	<u>Certified</u>	<u>Total BA</u> <u>Employment</u>
J. Silverstone 421 E. Washington Clinton, Il. P/M	II	Certified	7 Months 5/9/80 12/12/80
John Shelley 610 E. Main St. Decatur, Il. Mat'l Control	I	Certified	12 Months 11/12/80 10/20/81
Howard Skoog 03 E. Union Nahomet, Il. Civil	II	Certified	5 Months 4/12/78 10/1/79
Kuft Sommer 04 Schottsdale St. Winter Park, Fla. Civil	II	Certified	24 Months 4/4/77 3/27/79
Charles Staffold 8 N. Mulberry St. Clinton, Il. Civil	II	Certified	42 Months 5/10/76 1/6/81
Douglas Stephens 07 E. High Street Farmer City, Il. Vendor Surveillance	II	Certified	12 Months 7/21/80 6/1/81
Gary Sutton R. 5th Ave, Apt. #4 Crystal River, Fla. Civil	II	Certified	31 Months 3/8/76 11/6/79

<u>Full Name</u> <u>Address</u> <u>Occupation of Position</u>	<u>Level</u>	<u>Certified</u>	<u>Total BA</u> <u>Employment</u>
Martin R. Telley P.O. Box 306 Clinton, Il.	III	Certified	10/18/74 1/14/77
Fred L. Thompson 95 Loma Drive Forsight, Il. Elect.	I	Certified	2 Months 6/17/80 8/8/80
Tim Walker 313 Anchor Drive Bloomington, Il. P/M	III	Certified	47 Months 4/5/77 8/15/80
Harold Washington 609 E. Clark, Apt. 35 Champaign, Il. Electrical	II	Certified	5 Months 1/5/81 6/2/81
Michael Watkins RR. #2 Clinton, Il. Electrical	I	Certified	5 Months 2/18/81 7/3/81
Steve Wilber 5 N. Adams P.O. Box 561 Cerro Gordo, Il. Electrical	I	Certified	5 Months 2/4/81 7/30/81
R. C. Wilson 204 W. 18th Terrace Russellville, Ark. Electrical	III	Certified	35 Months 8/18/75 7/26/78

<u>Full Name</u> <u>Address</u> <u>Occupation of Position</u>	<u>Level</u>	<u>Certified</u>	<u>Total BA</u> <u>Employment</u>
Clarence Winfrey 2311 Galen St. #4c Champaign, Il. Civil	III	Certified	59 Months 5/24/76 4/7/81
Don Woatten 2817 Tracy, Apt. #12 Bloomington, Il. Electrical	I	Certified	6 Months 4/27/81 10/30/81
Charles Zalewski 522 W. Green St. Champaign, Il. Civil	II	Certified	42 Months 6/2/76 2/27/81
Merle L. Fumwalt 62 W. Virginia, Apt 2 Peoria, Il. Civil	II	Certified	3 Months 5/16/79 8/17/79
Robert Buch 3220 Vining Dr. Decatur, Il. OC C/S	III	Certified	21 Months 7/2/74 4/1/76
John Linchen 413 N. Monroe Clinton, Il. OC Mgr.	III	Certified	70 Months 10/1/76 1/15/81
Wendy Oldinburs 250 Cleveland Ave. Apt. #325 St. Joseph, Mich. Doc. Coord.	II	Certified	20 Months 10/17/77 4/13/79

<u>Full Name</u> <u>Address</u> <u>Occupation of Position</u>	<u>Level</u>	<u>Certified</u>	<u>Total BA</u> <u>Employment</u>
G. Paidchech 239 Field Court Decatur, Il. OC Mgr.	III	Certified	12 Months 4/20/74 8/30/76
Piath 809 White Clinton, Il. Doc. Coord.	II	Certified	42 Months 9/28/77 1/7/81

EXHIBIT B

Exhibit B
 Present Employees of Baldwin Associates'
 Quality Control Department Responsible For Mechanical Inspection

NAME	ADDRESS	DUTIES/ RESPONSIBILITIES	QUALIFICATIONS	SUBSTANCE OF ANY COMPLAINTS
R. Campbell	Baldwin Associates P.O. Box 306 Clinton, IL 61727	Sr. Piping/Mechanical Engineer	Certified Level III ANSI 45.2.6	No written complaints received
W. Stokes	Same as Above	Piping/Mechanical Quality Control Engineer	Certified Level II ANSI 45.2.6	No written complaints received
L. Clark	Same as Above	Piping/Mechanical Inspector	Certified Level II ANSI 45.2.6	No written complaints received
H. Batthauer	Same as Above	Piping/Mechanical Inspector Supervisor	Certified Level II ANSI 45.2.6	No written complaints received
B. Weaver	Same as Above	Piping/Mechanical Lead Inspector	Certified Level II ANSI 45.2.6	No written complaints received
D. Perkins	Same as Above	Piping/Mechanical Lead Inspector	Certified Level II ANSI 45.2.6	No written complaints received
V. Mehta	Same as Above	Piping/Mechanical Inspector	Certified Level II ANSI 45.2.6	No written complaints received
M. Cook	Same as Above	Piping/Mechanical Inspector	Certified Level II ANSI 45.2.6	No written complaints received
R. Emerson	Same as Above	Piping/Mechanical Inspector	Certified Level I ANSI 45.2.6	No written complaints received
C. Wade	Same as Above	Piping/Mechanical Inspector	Certified Level I ANSI 45.2.6	No written complaints received
J. Eaton	Same as Above	Piping/Mechanical	Certified Level I ANSI 45.2.6	No written complaints received
L. Schaffert	Same as Above	In training for Piping/Mechanical Inspector	In Training	No written complaints received

NAME	ADDRESS	DUTIES/ RESPONSIBILITIES	QUALIFICATIONS	SUBSTANCE OF ANY COMPLAINTS
J. Culumber	Baldwin Associates P.O. Box 306 Clinton, IL 61727	In Training for Piping/Mechanical Inspector Currently Certified Material Control Inspector	In Training Certified Level II ANSI 45.2.6	No written complaints received
M. Stone	Same as Above	Piping/Mechanical Inspector	Certified Level II ANSI 45.2.6	No written complaints received
G. Montgomery	Same as Above	Piping/Mechanical Inspector	Certified Level I ANSI 45.2.6	No written complaints received
C. Hale	Same as Above	Piping/Mechanical Inspector	Certified Level I ANSI 45.2.6	No written complaints received
G. Ekiss	Same as Above	Storage and Maintenance	Certified Level I ANSI 45.2.6	No written complaints received
J. Golden	Same as Above	Piping/Mechanical Inspector	Certified Level II ANSI 45.2.6	No written complaints received
R. Maples	Same as Above	Piping/Mechanical Inspector	Certified Level II ANSI 45.2.6	No written complaints received
K. Reeves	Same as Above	Piping/Mechanical Inspector	Certified Level II ANSI 45.2.6	No written complaints received
R. Jackson	Same as Above	Piping/Mechanical Inspector	Certified Level I ANSI 45.2.6	No written complaints received
K. Frey	Same as Above	Piping/Mechanical Inspector	Certified Level I ANSI 45.2.6	No written complaints received
I. Padget	Same as Above	Calibration Inspector	Certified Level II ANSI 45.2.6	No written complaints received
R. Sullivan	Same as Above	Calibration Inspector	Certified Level II ANSI 45.2.6	No written complaints received

NAME	ADDRESS	DUTIES/ RESPONSIBILITIES	QUALIFICATIONS	SUBSTANCE OF ANY COMPLAINTS
S. May	Baldwin Associates P.O. Box 306 Clinton, IL 61727	Piping/Mechanical Inspector	Certified Level II ANSI 45.2.6	No written complaints received
J. Rogers	Same as Above	Piping/Mechanical Inspector	Certified Level I ANSI 45.2.6	No written complaints received