

August 8, 1985

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

DOCKETED  
USNRC

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

\*85 AUG 16 A10:54

In the Matter of )  
COMMONWEALTH EDISON COMPANY )  
(Braidwood Nuclear Power Station, )  
Units 1 and 2) )

Docket Nos.

OFFICE OF SECRETARY  
DOCKETING & SERVICE  
BRANCH  
50-456  
50-457

NRC STAFF SUPPLEMENTAL RESPONSE TO INTERVENORS'  
FIRST SET OF INTERROGATORIES AND REQUESTS TO PRODUCE

RESPONSES TO GENERAL INTERROGATORIES

INTERROGATORY 1

Please state the full name, address, occupation and employer of each person answering the interrogatories or assisting in the preparation of such answers, and designate the interrogatory or the part thereof he or she answered.

ANSWER

This answer supplements our response filed July 31, 1985.

The following individuals participated in the preparation of the supplemental answers to the interrogatories. Those individuals who either prepared the answer or made major contributions to specific interrogatories are further identified.

W. S. Little  
Director, Braidwood Project  
U.S. NRC Region III  
799 Roosevelt Rd.  
Glen Ellyn, IL 60137

General Interrogatory 1 and 2  
Specific Interrogatories 1-4,  
40, 54 and 55

R. A. Fortuna  
Deputy Director, Office of  
Investigations  
U.S. NRC  
Washington, DC 20555

Specific Interrogatory 55

INTERROGATORY 2

Please identify each and every person whom you are considering to call as a witness at the hearing in this matter on this contention, and with respect to each such person, please:

- a. State the substance of the facts and opinions to which the witness is expected to testify;
- b. Give a summary of the grounds for each opinion; and
- c. Describe the witness' educational and professional background.

ANSWER

a. and b. The following inspectors may testify concerning their inspection findings which resulted in the violations listed in the QA contention. The basis for their testimony will be their knowledge and their documented findings in NRC inspection reports.

L. G. McGregor

R. D. Schulz

R. N. Gardner

J. W. Muffett

C. C. Williams

W. J. Key

The above inspectors may also testify concerning the significance of their inspection findings and violations. Mr. Keppler and Mr. Little may testify as to the significance of the findings and violations from the Region III management perspective. Messrs. Jacobs, Muffett and Williams may testify as to the engineering and Code significance of the violations in the areas of welding, mechanical, and electrical, respectively.

Mr. Little may testify as to the Region III management oversight of the admitted corrective action programs (CAPs). Mr. Muffett may testify as to the adequacy of the admitted CAPs: Materials Traceability Verification, Corroded Piping and 82-05. He may be supported by additional witnesses with engineering and code expertise as necessary. John G. Spraul may testify as to the Staff's review of the submitted QA program. The professional qualifications of all of the potential witnesses are set forth in their attached resumes.

### 3. Responses to Specific Interrogatories

#### INTERROGATORY 1

Do you agree that the Braidwood Quality Assurance (QA) Program must comply with each of the criteria of Appendix B to 10 CFR Part 50 in order to establish Applicant's entitlement to the licenses sought in this proceeding?

#### ANSWER

The Staff understands the term "Braidwood Quality Assurance Program" to mean the documented written policies, procedures or instructions through which the Applicant takes planned and systematic actions necessary to provide adequate confidence that the safety-related functions of a structure, system, or component will perform satisfactorily in service. Pursuant to this understanding of the interrogatory, the Staff's answer is yes, unless a duly authorized exemption is requested and granted.

#### INTERROGATORY 2

If the answer to No. 1 is negative, please describe in detail the respects in which such compliance is not required and explain fully the factual and legal basis for your position.

ANSWER

N.A. See 1.

INTERROGATORY 3

Does the Braidwood Quality Assurance Program comply with each of the criteria of Appendix B to 10 CFR Part 50?

ANSWER

Yes.

INTERROGATORY 4

What are the bases for your responses to Nos. 1-3? Please identify all documents, physical evidence, testimony or oral statements by any person and legal authority on which you rely in support of your position.

ANSWER

Preliminary Safety Analysis Report, Final Safety Analysis Report; and numerous Region III inspection reports starting in 1974. See also answer to Interrogatory 12.

INTERROGATORY 40

In what manner, if any, did Commonwealth Edison apply lessons learned with regard to HVAC installation from its LaSalle nuclear plant to Braidwood? Please describe in detail. Has the NRC ever identified failure by Commonwealth Edison to apply such lessons learned? If so, describe such identification. Please identify any documents which reflect these answers.

ANSWER

The Staff objected to the first two questions of this interrogatory. With regard to the third question the Staff has not identified any failure by Applicant to apply the lessons learned at LaSalle in the area of HVAC installation.

INTERROGATORY 54

Have any complaints been made by any present or former Braidwood employee of harassment, intimidation, retaliation or other discrimination by Commonwealth Edison or any contractor because of the expression of safety or quality concerns or the performance of duty in assuring compliance with applicable codes, specifications or procedures? If so, please describe in detail the circumstances of each such complaint, including the name and address of all person involved, the resolution and any corrective or remedial action taken. Identify any documents which reflect this answer.

ANSWER

See the answer to No. 55.

INTERROGATORY-55

Please describe in detail any and all complaints by Comstock Quality Control inspectors or other QA personnel, including but not limited to those matters referred to in NRC Inspection Report 84-34/84-32, page 4. Include names and addresses, current job title and status for all persons involved, the investigation and resolution of these complaints and any disciplinary or corrective action taken. Please identify any documents reflecting these answers.

ANSWER

This answer only pertains to the admitted contention: alleged intimidation of L. K. Comstock QC inspectors. The staff is aware of the following complaints which have been brought to its attention:

1. Allegation 84-A-0119

John D. Seeders, Former Level II QC Inspector  
115 West High  
Morris, IL 60450

This allegation is summarized and the results of the staff's conclusions described in the following Paragraph 2.b from Inspection Report 50-456/84-34; 50-457/84-32.



"(Closed) Allegation (RIII-III84-A-0019). On August 17, 1984, the alleger, an employee of the L. K. Comstock quality control department, stated that he was intimidated and harassed by L. K. Comstock quality control supervisory personnel. On September 21, 1984, the inspector met with the alleger and four other quality control inspectors. The five individuals did not provide any specific examples or records substantiating intimidation or harassment. During the course of the interview, it was revealed that the main issue is a morale problem which appears to be related to monetary matters and subjective opinions of poor management. The inspector met with Commonwealth Edison Project management and Construction Superintendent to discuss the issue of intimidation and harassment. Subsequently, Commonwealth Edison management met with the L. K. Comstock Site Quality Control management to ensure that all parties understood that any form of intimidation or harassment would not be tolerated by Commonwealth Edison or the NRC. This allegation is considered closed."

2. Allegation RIII-84-0123

Worley O. Puckett, Former Level III QC Inspector  
3672 Spring Grove Road  
Bethel, Ohio 45106

Mr. Puckett alleged deficient Comstock welding activities and employment discrimination resulting in his being discharged by L. K. Comstock. The DOL Wage and Hour Division Area Director concluded in a letter dated November 6, 1984, that Mr. Puckett was a protected employee engaging in protected activity and that he was discriminated against within the meaning of Section 210 of the Energy Reorganization Act of 1974. L. K. Comstock appealed the Area Director's decision. A Department of Labor (DOL) hearing concerning the employment discrimination charge commenced on December 12, 1984. The hearing was dismissed on January 11, 1985, after L. K. Comstock and Mr. Puckett entered into a settlement agreement. The Staff's

inspection into the deficient welding activities is in progress and will be documented in future inspection reports.

3. Allegation RIII-85-05

An anonymous L. K. Comstock employee alleged deficiencies in the L. K. Comstock Rework Program and harassment in the assignment of his work hours. The Staff's inspection into this matter is in progress and will be documented in a future inspection report.

4. Allegation RIII-85-0062

An anonymous person alleged that L. K. Comstock supervisors and lead inspectors were not qualified.

The Staff's inspection into this matter is in progress and will be documented in a future inspection report.

5. Allegation RIII-85-0068

This allegation file relates to allegations received from three L. K. Comstock Level II QC inspectors, one of whom is anonymous and two whose names are confidential. The allegations were: inspector motivation and ability affected by pressure to perform large quantities of work; NRC spread too thin; electrical inspector told not to inspect outside of his inspection area; (e.g. base metal reduction) and L. K. Comstock inspectors were qualified too quickly.

The Staff inspection into these allegations is in progress and will be documented in a future inspection report.

6. Allegation RIII-85-A-0072

This allegation file relates to allegations received from twenty-four L. K. Comstock inspectors whose names and addresses were given to Mr. Cassel, Counsel for BPI, by the NRC Senior Resident Inspector Mr. McGregor, on July 24, 1985.

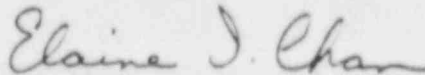
The allegations are summarized as follows: L. K. Comstock was more concerned with the quantity, rather than the quality of inspections; unqualified supervisors; intimidation of QC inspectors by a QC supervisor; inspector closed out 93 hanger inspections in one day; closeout of NCRs without field inspections; ineffectiveness of the Commonwealth Edison Quality First Program; employment discrimination; insufficient Comstock inspection staff; and, hangers were not built according to drawings. These allegations were immediately turned over to Commonwealth Edison to investigate and initiate any appropriate action. As a result a QC supervisor accused of intimidation was removed from his job, CECO management met with LKC management and with the LKC inspectors to emphasize quality and the methods available to inspectors to bring their quality concerns and complaints of intimidation and harassment to the attention of the proper persons.



The NRC inspection into the allegations and CEC's investigation and actions is in progress and will be reported in a future inspection report.

7. In addition to the above, the NRC Office of Investigations, has two open cases related to the subject matter of this interrogatory. The Commission has a special policy for disclosure of information when OI investigations are conducted in areas with potential relevance to a pending adjudication. See 49 Fed. Reg. 36,032 (1984).

Respectfully submitted,



Elaine I. Chan  
Counsel for NRC Staff

Dated at Bethesda, Maryland  
this 8th day of August, 1985



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION III  
799 ROOSEVELT ROAD  
GLEN ELLYN, ILLINOIS 60137

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of

COMMONWEALTH EDISON COMPANY

Braidwood Nuclear Power Station,  
Units 1 and 2

Docket Nos. 50-456  
50-457

AFFIDAVIT OF JAMES G. KEPPLER

I, James G. Keppler, being first duly sworn do depose and state:

1. I am employed as the Regional Administrator, U.S. Nuclear Regulatory Commission, Region III, 799 Roosevelt Road, Glen Ellyn, IL 60137.
2. I have provided the answer to Interrogatory 50. That answer is true and correct to the best of my knowledge, information and belief.

James G. Keppler  
James G. Keppler

Swore to and subscribed before me  
this 31 day of July 1985

Marcia J. Smith  
Notary Public

My Commission Expires 2/86

NUCLEAR REGULATORY COMMISSION  
BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of

COMMONWEALTH EDISON COMPANY

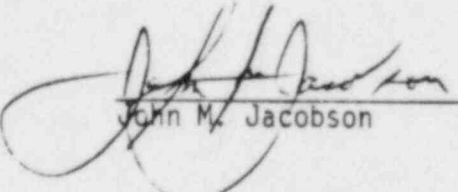
(Braidwood Nuclear Power Station  
Units 1 and 2

Docket No. 50-456  
50-457


AFFIDAVIT OF JOHN M. JACOBSON

I, John M. Jacobson, being first duly sworn do depose and state:

1. I am employed as a Metallurgist, in the Materials and Processes Section, Engineering Branch, Division of Reactor Safety, Region III, U.S. Nuclear Regulatory Commission, 799 Roosevelt Road, Glen Ellyn, IL., 60137.
2. I have provided the answers to Interrogatories 25, 29, 33, 34, 35, 39, 47 and 48. These answers are true and correct to the best of my knowledge, information and belief.

  
John M. Jacobson

Sworn to and subscribed before me  
this 31 day of July 1985

  
Notary Public

My Commission Expires 2/86

NUCLEAR REGULATORY COMMISSION  
BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of

COMMONWEALTH EDISON COMPANY

(Braidwood Nuclear Power Station  
Units 1 and 2

Docket No. 50-456  
50-457

AFFIDAVIT OF RONALD N. GARDNER

I, Ronald N. Gardner, being first duly sworn do depose and state:

1. I am employed as a Project Inspector, in Projects Branch 2, Division of Reactor Projects, U.S. Nuclear Regulatory Commission, Region III, 799 Roosevelt Road, Glen Ellyn, IL., 60137.
2. I have provided part of the answer to Interrogatory 24. That answer is true and correct to the best of my knowledge, information and belief.

Ronald N. Gardner  
Ronald N. Gardner

Sworn to and subscribed before me  
this 31 day of July 1985

Marcia J. Smith  
Notary Public

My Commission Expires 2/86

NUCLEAR REGULATORY COMMISSION  
BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of

COMMONWEALTH EDISON COMPANY

(Braidwood Nuclear Power Station  
Units 1 and 2

Docket No. 50-456  
50-457


AFFIDAVIT OF WILLIAM S. LITTLE

I, William S. Little, being first duly sworn do depose and state:

1. I am employed as the Director, Braidwood Project, in the Division of Reactor Projects, U.S. Nuclear Regulatory Commission, Region III, 799 Roosevelt Road, Glen Ellyn, IL., 60137.
2. I have provided the answers to General Interrogatories 1, 3 and 4 and Specific Interrogatories 5, 6, 7, 8, 15, 18, 23 and 60. Those answers are true and correct to the best of my knowledge, information and belief.

  
William S. Little

Sworn to and subscribed before me  
this 31 day of July 1985

  
Notary Public

My Commission Expires 2/86

NUCLEAR REGULATORY COMMISSION  
BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of

COMMONWEALTH EDISON COMPANY

(Braidwood Nuclear Power Station  
Units 1 and 2

Docket No. 50-456  
50-457

AFFIDAVIT OF PAUL R. PELKE

I, Paul R. Pelke, being first duly sworn do depose and state:

1. I am employed as a Project Inspector, in Projects Branch 3, in the Division of Reactor Projects, U.S. Nuclear Regulatory Commission, Region III, 799 Roosevelt Road, Glen Ellyn, IL., 60137.
2. I have provided the answers to Interrogatories 12, 21, and 51. These answers are true and correct to the best of my knowledge, information and belief.

Paul R. Pelke  
Paul R. Pelke

Sworn to and subscribed before me  
this 31 day of July 1985

Marcia S. Smith  
Notary Public

My Commission Expires 2/86



UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of

COMMONWEALTH EDISON COMPANY

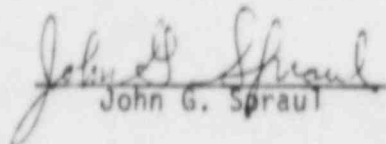
(Braidwood Nuclear Power Station,  
Units 1 and 2)

Docket Nos. 50-456  
50-457


AFFIDAVIT OF JOHN G. SPRAUL

I, John G. Spraul, being first duly sworn do depose and state:

1. I am employed as a Quality Assurance Engineer, in the Quality Assurance Branch, Division of Quality Assurance, Vendor, and Technical Training Center Programs, Office of Inspection and Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.
2. I have provided the answer to Interrogatory 12. That answer is true and correct to the best of my knowledge, information and belief.

  
John G. Spraul

Sworn to and subscribed before me  
this 24<sup>th</sup> day of July 1985

  
Notary Public

My Commission Expires 7/1/86

NUCLEAR REGULATORY COMMISSION  
BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of

COMMONWEALTH EDISON COMPANY

(Braidwood Nuclear Power Station  
Units 1 and 2

Docket No. 50-456  
50-457

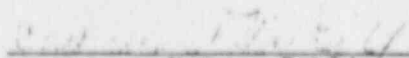
AFFIDAVIT OF JAMES W. MUFFETT

I, James W. Muffett, being first duly sworn do depose and state:

1. I am employed as a Reactor Inspector, in the Materials and Processes Section, Engineering Branch, Division of Reactor Safety, Region III, U.S. Nuclear Regulatory Commission, 799 Roosevelt Road, Glen Ellyn, IL., 60137.
2. I have provided the answers to interrogatories 24, 26, 27, 28, 31, 32, 36, 37, 38, 41, 42, 43, 44, 45, 46 and 49. These answers are true and correct to the best of my knowledge, information and belief.

  
James W. Muffett

Sworn to and subscribed before me  
this 14 day of April 1985

  
\_\_\_\_\_  
Notary Public

NOTARY PUBLIC

My Commission Expires

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of )

COMMONWEALTH EDISON COMPANY )

Docket No. 50-456

50-457

(Braidwood Nuclear Power Station )  
Units 1 and 2 )

AFFIDAVIT OF LEONARD G. MCGREGOR

I, Leonard G. McGregor, being first duly sworn do depose and state:

1. I am employed as the Senior Resident Inspector, Operations, U.S. Nuclear Regulatory Commission, Resident Inspectors Office, RR #1, Box 79, Braceville, IL. 60407.
2. I have provided part of the answer to Interrogatory 24. That answer is true and correct to the best of my knowledge, information and belief.

*Leonard G. McGregor*  
Leonard G. McGregor

Sworn to and subscribed before me  
this 1st day of August 1985

*Nancy R. Coen*  
Notary Public

My Commission Expires OCTOBER 11, 1986  
UNITED STATES OF AMERICA

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of )

COMMONWEALTH EDISON COMPANY )

Docket No. 50-456  
50-457

(Braidwood Nuclear Power Station )  
Units 1 and 2 )

AFFIDAVIT OF ROBERT D. SCHULZ

I, Robert D. Schulz, being first duly sworn do depose and state:

1. I am employed as the Senior Resident Inspector, Construction, U.S. Nuclear Regulatory Commission, Resident Inspectors Office, RR #1, Box 79, Braceville, IL. 60407.
2. I have provided parts of the answers to Interrogatories 32 through 35, 37 through 39, and 41 through 45. Those answers are true and correct to the best of my knowledge, information and belief.

Robert D. Schulz  
Robert D. Schulz

Sworn to and subscribed before me  
this 1st day of August 1985

Carol J. McCoy  
Notary Public

My Commission Expires 10/30/85  
UNITED STATES OF AMERICA

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of

COMMONWEALTH EDISON COMPANY

(Braidwood Nuclear Power Station,  
Units 1 and 2)

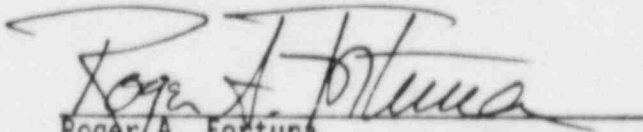
Docket Nos. 50-456  
50-457

AFFIDAVIT OF ROGER A. FORTUNA


I, Roger A. Fortuna, being first duly sworn do depose and state:

1. I am employed as the Deputy Director, Office of Investigations, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

2. I have provided part of the answer to Interrogatory 55. That answer is true and correct to the best of my knowledge, information and belief.

  
Roger A. Fortuna

Subscribed and sworn to before  
me this 8th day of August, 1985

  
Notary Public

My commission expires: July, 1986

LEONARD G. MCGREGOR

Organization: Nuclear Regulatory Commission, Region III  
Title: Senior Resident Inspector - Braidwood Station

Grade: GG-14

Birth Date: August 26, 1935

Education: South Dakota State College  
Civil Engineering, 1954

Experience:

1982 to Present	<u>Senior Resident Inspector (Operations) - Braidwood, IL - Plans, supervises, and conducts inspections at the Braidwood site, to ascertain licensee compliance, public health and safety. Represents the NRC to the licensee, state and local officials, and the news media (NRC).</u>
1981 to 1982	<u>Acting Section Chief, Reactor Projects Section 2B - Responsible for coordinating and controlling inspection activities related to construction and operation of assigned nuclear power plants (NRC).</u>
1980 to 1981	<u>Project Inspector - Inspected reactors in operation and coordinated inspection program at assigned sites (NRC).</u>
1978 to 1980	<u>Reactor Inspector, - Reactor Operations and Nuclear Support Branch - Inspect reactors in operation, test, and startup (NRC).</u>
1978 to 1978	<u>Lead Mechanical Startup Engineer - Startup and preoperational testing of Salem Unit 2. Supervised 14 startup engineers.</u>
1976 to 1978	<u>Director of Transportation - Responsible for operation, budget, scheduling, training and safety. Supervisory responsibility for 42 people (U.S. Navy).</u>
1972 to 1976	<u>Nuclear Power Plant Shift Supervisor/NPP Maintenance Supervisor/NPP Operation Supervisor - Directed the operations for all maintenance shops and deck crew on a floating nuclear power plant. Supervised reactor refueling team and plant operations. Certified as a Shift Supervisor (U.S. Army).</u>



ROBERT D. SCHULZ

Organization: U.S. Nuclear Regulatory Commission, Region III

Title: Reactor Inspector

Grade: GG-14

Birth Date: June 9, 1948

Education: B.S., Northern Illinois University, 1970  
Completed BWR Technology Courses and Two-Week PWR  
Technology Course, Chattanooga, TN

Experience:

1984 to Present Senior Resident Inspector (Construction) - Braidwood Site. Plans, supervises and conducts inspections at the site. Represents the NRC to the licensee, state and local officials, and the news media. (NRC)

1983 to 1984 Reactor Inspector - Inspects reactors under construction and in operation. (NRC)

1982 to 1983 Senior Resident Inspector - Nine Mile Point Plant, Region I, Construction Site. Plans, supervises and conducts inspections at the site. Represents the NRC to the licensee, state and local officials, and the news media. (NRC)

- 1981 to 1982 Resident Inspector - Nine Mile Point Plant, Region I, Construction Site. Performed 2513 and 2514 inspection programs at the Nine Mile Point Plant. (NRC)

1980 to 1981 Reactor Inspector - Inspected reactors under construction and in operation in Region III. (NRC)

1975 to 1980 Q.A. Engineer - Morrison Construction and Engineering, LaSalle Station, Braidwood Township, IL. Mechanical Contractor.

1973 to 1975 Senior Buyer - Sundstrand Nuclear, Belvidere, IL. Purchased material for the Fast Flux test Facility located in Hanford, Washington.

1971 to 1973 Quality Control Inspector - Morrison Construction and Engineering, Zion Station, Zion, IL. Mechanical Contractor.

RONALD N. GARDNER

ORGANIZATION: U.S. Nuclear Regulatory Commission, Region III  
TITLE: Project Inspector, Division of Reactor Projects  
GRADE: GS-14  
BIRTH DATE: June 19, 1945  
EDUCATION: 1968 - 1970, Thomas Nelson Community College  
1970 - 1972, Virginia Polytechnic Institute, B.S.  
in Electrical Engineering  
1975, Department of the Navy, Ship Superintendent  
School (Nuclear)

EXPERIENCE:

July 1, 1985 to Present      Project Inspector - NRC - Maintaining status of operational and regulatory performance of operating reactors.

August 1984 to July 1, 1985      Project Manager - NRC - Manages and coordinates inspections/investigations of BCAP activities to assure that the program is being conducted in accordance with regulatory requirements and licensee commitments.

October 1982 to August 1984      Project Manager - NRC - Coordinate licensing activities and perform inspections on reactors under construction (Office of Special Cases).

October 1980 to October 1982      Electrical Inspector - NRC - Perform electrical inspections on reactors under construction.

1977 to 1980      Electrical Engineer - Daniel Construction Company - Responsible for systems completion and cable terminations on nuclear plants under construction.

1975 to 1977      Electrical Engineer - Norfolk Naval Shipyard - Responsible for timely overhaul of Nuclear Submarines.

1972 to 1975      Electrical Test Engineer - Newport News Shipyard - Responsible for testing of electrical systems on Nuclear Surface Ships.

1971 - 1975      Reactor Test and Startup and Operations Inspector -  
Project Inspector at Browns Ferry for three years and  
Brunswick for six months. Assisted in inspections at  
other sites. (AEC, Region II)

1968 - 1971      Licensing Supervisor - Managed B&W licensing activities  
for Crystal River, Davis-Besse, Three Mile Island and  
Bellefonte plants. Supervised three-four licensing  
engineers. (B&W)

1966 - 1968      Supervisor, Emergency Core Cooling Test Section -  
Developed and managed research and development programs in  
support of emergency core cooling systems for commercial  
nuclear power plants. Supervised four engineers.  
(Phillips Petroleum Company)

1965 - 1966      Supervisor, Heat Transfer Hydraulics and Radiography  
Section - Engineering support of test reactor operations  
in areas of fuel inspection and testing; hydraulic  
facility operation; safety analysis, preoperation, startup  
and surveillance testing; core thermal-hydraulics; and  
nuclear engineering. Provided radiography service for  
NRTS. Supervised six-eight engineers and six radio-  
graphers and NDT technicians. (Phillips Petroleum)

1959 - 1965      Plant Engineering - Performed various engineering  
functions in support of test reactor operation.  
(Phillips Petroleum Company)

1956 - 1959      Project Engineering - Project engineering for liquid metal  
cooled and fueled experiments in test reactors. (Phillips  
Petroleum Company)

1955 - 1956      Research Engineering - Development testing in the area of  
heat transfer and refrigeration systems. (Trane Company)

1953 - 1955      Pilot Plant Engineer - Organic chemical process  
development. (Tennessee Corporation)

JAMES W. MUFFETT

Organization: Region III  
Title: Reactor Inspector (Mechanical)  
Grade: GS-14  
Birth Date: January 5, 1950  
Education: B. S. Physics, Purdue University 1972  
MS Mechanical Engineering  
University of Idaho 1978  
Registrations: Professional Engineer, Illinois, Indiana, Minnesota

Experience:

1982 - Present     Reactor Inspector - Responsible for inspection of reactor under construction and in operation.

1981 - 1982     Engineering Manager - Managed mechanical design and analysis group with staff of 20 (NuTech).

1980 - 1981     Product Engineer - Responsible for development of advanced design methods. (International Harvester)

1978 - 1980     Senior Engineer - Responsible for development and application of advanced design methods. (Cummins Engine Co., Inc.)

1975 - 1978     Group Leader - Leader of piping analysis group which performed piping analysis for LOFT reactor at Idaho National Engineering Lab. (EG & C Idaho)

1972 - 1975     Stress Analyst - Performed piping stress analysis, support design and field interface duties at various nuclear power stations. (Sargent & Lundy)

CORDELL C. WILLIAMS

Organization: Region III

Title: Chief, Plant Systems Section

Grade: GS-15

Birth Date: 11/28/39

Education: Cumulative 2 years college; University of Texas,  
Austin, Texas  
Contra Costa College, Contra Costa, California  
(Engineering)

Experience:

1/82 - Present      Chief, Plant Systems Section - Engineering Inspection Branch. Supervises engineering support inspectors with responsibility for program inspections, investigations, and inquiries to determine, for facilities under Construction and Operations, if management's operations and construction are accomplished in a manner to protect health and safety of the public. Recommend action to cause a licensee to achieve compliance with requirements. (NRC)

8/81 - 1/82      Acting Chief, Engineering Inspection Branch - Manages a branch consisting of four sections having a staff of approximately 35 professionals with diverse engineering backgrounds. The branch is responsible for routine and reactive inspections of facilities under construction, during preoperational testing and during operation. Manages the regional program for evaluation of matters regarding specialized engineering skills.

1981      Chief, Plant Systems Section

1979 - 1981      Chief, Projects Section No. 2 - Reactor Construction and Engineering Support Branch. Supervises project inspectors with responsibility for program inspections, investigations, and inquiries to determine, for facilities under construction, if management and construction are accomplished in a manner to protect health and safety of the public. Recommend action to cause a licensee to achieve compliance with requirements. (NRC)

1975 - 1979      Reactor Inspector - Engineering and Project Inspector Reactor Construction and Engineering Support Branch. Inspects nuclear power plants under construction and operations (in-service inspection). (NRC/AEC)

WILLIAM J. ELY

Organization: Region III  
Title: Reactor Inspector  
Grade: GS-14  
Birth Date: 09/27/24  
Education: High School Graduate, two years college credits  
Experience:

- 1971 - Present Reactor Inspector, Engineering Programs Branch, Materials & Processes Section - Inservice inspection, inspection of modifications, and repairs of operating nuclear power reactors. Inspection of nuclear power plants under construction. (NRC)
- 1968 - 1971 Quality Assurance Engineer - On-site auditing and surveillance of construction activities of nuclear power plants under construction. (Bechtel Corporation)
- 1966 - 1968 Construction Inspector and Supervisor - inspection, testing, and acceptance of equipment manufactured in the United States and Japan to be used in construction of the California aqueduct. (Department of Water Resources, State of California)
- 1967 - 1968 Nondestructive Testing Technician - Assist in preparation of NDT procedures, perform and evaluate test results for generating equipment to be used aboard U.S. Navy submarines and nuclear power plants. (Westinghouse Electric Corporation)
- 1966 - 1967 Recruit - Chief Machinery Repairman - Various ratings and responsibilities in the Engineering Department and Quality Assurance Division aboard ship and ashore.



JOHN M. JACOBSON

Organization: Region III

Title: Reactor Inspector (Metallurgist)

Grade: GS-14

Birth Date: May 25, 1949

Education: B.S. Metallurgical Engineering, University of Illinois, 1975

Experience:

1984 - Present      Reactor Inspector, Division of Engineering - Responsible for routine and reactive inspections and investigations of reactor plants under construction and operating. (NRC)

1982 - 1984      Senior Consultant - Responsible for providing senior consulting services in the areas of welding metallurgy, materials, engineering, welding program development and field operations. (Nutech Engineers)

1980 - 1982      Senior Welding Engineer - Responsible for welding procedure development, resolution of metallurgical/welding issues for both shop and field fabrication of nuclear containments. Duties included responsibility for the Metallurgical Laboratory and numerous research and development programs. (Graver Energy Systems)

1977 - 1980      Maintenance Staff Engineer - Responsibilities included coordination and development of station welding programs, preparation of maintenance and repair procedures, design of plant modifications and technical direction of large scale maintenance projects. (Commonwealth Edison, Dresden Nuclear Power Station)

1975 - 1977      Quality Assurance Engineer - Responsible for review of contractor's procedures, daily monitoring of welding and erection activities of the LaSalle County Nuclear Power Station, review and acceptance of NDE results and auditing of supplier's facilities. (Commonwealth Edison, LaSalle County Nuclear Power Station)

WILLIAM S. LITTLE

TE: SM DS JL 28

Organization: U. S. Nuclear Regulatory Commission, Region III

Title: Director, Braidwood Project

Grade: GG-15

Birth Date: August 22, 1930

Education: B. S. Chemical Engineering  
Georgia Institute of Technology, 1953

Professional Memberships: Member of ASME Working Group on Duties and Responsibilities (SCIII)

Experience:

04/85 - Present Director, Braidwood Project - Manages the Braidwood inspection program. Supervises three resident inspectors and two project inspectors. (NRC, Region III)

11/84 - 04/85 - Chief, Operations Branch - Managed a branch consisting of approximately 30 professionals with diverse engineering backgrounds. The branch is responsible for reactor operator licensing and for routine and reactive inspections primarily at operating facilities. (NRC, Region III)

1982 - 11/84 Chief, Engineering Branch 2 - Manages a branch consisting of three sections having a staff of approximately 35 professionals with diverse engineering backgrounds. The branch is responsible for routine and reactive inspections at facilities under construction, during preoperational testing and during operation. Manages the regional program for evaluation of matters regarding specialized engineering skills. (NRC, Region III)

1980 - 1981 Chief, Reactor Projects Section - Supervised seven resident inspectors and one project inspector responsible for the inspection program at the Duane Arnold, Marble Hill, Monticello and Prairie Island sites. (NRC, Region III)

1975 - 1979 Chief, Nuclear Support Section - Supervised seven inspectors and one intern, providing specialists in support and the reactor operations inspection program; routinely inspecting in areas of core physics, core thermal hydraulics, refueling, preoperational and startup testing, training and requalification and containment leak rate tests; and responsible for research reactor inspection programs. (NRC, Region III)

JAMES G. KEPPLER

BIOGRAPHICAL INFORMATION

Mr. James G. Keppler has been Regional Administrator of the Nuclear Regulatory Commission's Region III Office since 1973. (The Nuclear Regulatory Commission was formed in January 1975 to take over the regulatory functions of the former Atomic Energy Commission.)

The Regional Office in Glen Ellyn is responsible for the NRC's inspection program and other regulatory activities at NRC-licensed facilities in eight midwestern states. This encompasses 17 nuclear power plants (24 reactors) now in operation, 6 power reactors under construction at five sites, 13 research reactors, four fuel facilities and 3,800 byproduct materials licenses -- generally for medical, industrial or educational applications..

Mr. Keppler joined the AEC in 1965 as a reactor inspector. Prior to his present post as Regional Administrator, he was Chief of the Reactor Testing and Operations Branch in the AEC Headquarters in Bethesda, Maryland.

He is a 1956 graduate of LeMoyne College in New York State. Mr. Keppler's experience in the nuclear field includes nine years with General Electric Company, first in its aircraft nuclear propulsion department and later in its reactor atomic power equipment department.

JOHN G. SPRAUL  
PROFESSIONAL QUALIFICATIONS  
QUALITY ASSURANCE BRANCH  
OFFICE OF INSPECTION AND ENFORCEMENT

I am a Quality Assurance Engineer in the Quality Assurance Branch in the Office of Inspection and Enforcement, U.S. Nuclear Regulatory Commission. In this position, I am responsible for the review and evaluation of applicants' descriptions of quality assurance programs proposed for the design, construction, and operation of nuclear power plants as assigned to me.

I received a Bachelor of Chemical Engineering degree from the Georgia Institute of Technology in 1951. In 1971, I completed the requirements for the Professional Designation in Quality Control at the University of California, Los Angeles. My nuclear experience prior to joining the NRC includes 2 years of engineering work in gaseous diffusion with the Goodyear Atomic Corporation and 12 years of nuclear fuel and nuclear power plant component design, manufacture, and testing with the Atomics International Division of Rockwell International. My quality assurance experience prior to joining the NRC includes 2 years as Chief Inspector and 4 years as Director of Quality Assurance at Atomics International, where I was responsible for managing the entire quality assurance program.

I joined the Quality Assurance Branch of the NRC in 1974. Since joining the NRC, I have reviewed the quality assurance program descriptions for design and construction and for operations for numerous nuclear power plants as well as topical reports on quality assurance submitted by utilities, architect-engineers, NSS suppliers, and constructors.

I am a member of the American Nuclear Society and a senior member of the American Society for Quality Control. In 1972, I was certified as a Quality Engineer by the American Society for Quality Control. This certification has been renewed to cover the 1983-1985 time period.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

DOCKETED  
USNRC

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

\*85 AUG 16 A10:54

In the Matter of )  
COMMONWEALTH EDISON COMPANY )  
(Braidwood Nuclear Power Station, )  
Units 1 and 2 )

Docket Nos. 50-456  
50-457

OFFICE OF SECRETARY  
DOCKETING & SERVICE  
BRANCH

CERTIFICATE OF SERVICE

I hereby certify that copies of "NRC STAFF SUPPLEMENTAL RESPONSE TO INTERVENORS' FIRST SET OF INTERROGATORIES AND REQUESTS TO PRODUCE" in the above-captioned proceeding have been served on the following by deposit in the United States mail, first class, by deposit in the Nuclear Regulatory Commission's internal mail system (\*), by hand delivery(\*\*), and express mail (\*\*\*) this 8th day of August, 1985:

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Administrative Judge  
Atomic Safety and Licensing Board  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

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Atomic Safety and Licensing Board  
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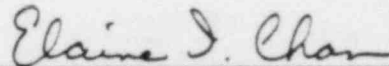
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Elaine I. Chan  
Counsel for NRC Staff