UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING APPEAL BOARD

In the Matter of	)	
	)	Docket Nos. 50-275
PACIFIC GAS AND ELECTRIC COMPANY	)	50-323
	)	(Construction Quality Assurance)
(Diablo Canyon Nuclear Power Plant, Units 1 and 2)	)	

AFFIDAVIT OF H.W. KARNER, P. DAWSON

STATE OF CALIFORNIA	)	
	)	ss.
COUNTY OF SAN LUIS OBISPO	)	

The above, being duly sworn, depose and say:

I, H.W. Karner, am Quality Assurance/Quality Control Manager for Pullman Power Products at the Diablo Canyon Power Plant.

I, P. Dawson, am Nondestructive Examination Technician, Level III, for Pullman Power Products at the Diablo Canyon Power Plant.

JI #197 and 198, Supplemental Motion at 12-13.

It is alleged that:

> Pullman's QA Manager Harold Karner waited more than a year, from November 1981 to December 1982, to respond to a Descrepant Condition Notice (DCN), and then responded with an unexplained, misleading assertion. An inspector had written a DCN, because unmarked tools were being used on stainless steel work. This practice violated procedures that require specially-marked, "separate tools for stainless work, so as not to contaminate the stainless steel with carbon steel." (citing 2/25/84, Anon. Aff. at 11.) After waiting more than a year, during which time he fired the inspector, Karner dispositioned the DCN by asserting that "the inspector in charge of the work" had verified use of the proper tools. The inspector who raised the issue had not changed his mind; and Karner did not identify any new inspector assigned to the DCN or the process used to verify acceptability of an unmarked tool a year later. (citing 2/25/84, Anon. Aff. at 11.)
>
> Management did not even permit the original inspector to temporarily halt the abuse described above. When he put a hold tag on the stainless steel work performed with unmarked tools, his leadman immediately "demanded to know whether I knew what I was doing, and ordered him to remove the hold tag. (citing 2/25/84, Anon. Aff. at 11.)

1. Review of DCN records has found DCN No 777-013 to be the subject of this allegation. The DCN was prepared on November 11, 1981, by J. McDermott.

2. Mr. McDermott prepared this DCN based on examination of a pipefitters tool set on the day following completion of work on a stainless steel pipe weld. Mr. McDermott did not find tools marked for use on stainless steel only and extrapolated this finding to the conclusion that controlled tools were not used for the work performed the preceeding day. On this basis, he prepared a DCN and hung a hold tag on the stainless pipe even though the weld had been assigned to and accepted by another QC inspector.

3. Upon receipt of DCN No 777-013, Paul Dawson, Mr. McDermott's Leadman, performed an investigation. He talked to the pipefitter whose tools were inspected by Mr. McDermott. The pipefitter stated that tools limited to stainless work and so marked were used on the subject work and they were stored following work completion since they were no longer needed. The pipefitter said if he had known why Mr. McDermott inspected his tools, he would have told him the proper tools were used the preceeding day. The results of this investigation were documented in a signed memorandum.

4. Following discussion with the pipefitter, Mr. Dawson directed the hold tag to be removed as he was satisfied that no QA/QC violation had occurred. Mr. Dawson informed Mr. McDermott of his findings and expected Mr. McDermott would modify or cancel the DCN.

5. Review of the DCN log, in preparation for close out of certain records, identified DCN No. 777-013 was still open. Fortunately, Mr. Dawson had documented his investigation findings in a signed memorandum. This memorandum allowed "accept as is" closure of the DCN on January 20, 1983. The memorandum is attached to the DCN.

6. Review of paragraphs 1 through 5 clearly shows that McDermott prepared a DCN without adequate investigation and closure, though delayed, was accomplished properly.

DATED: March 18, 1984

H.W. Karner

P. Dawson

Subscribed and sworn to
before me this 18th day
of March, 1984

Wendy Sproul
Notary Public in and for the
County of San Luis Obispo,
State of California.
My commission expires
June 30, 1986

PROFESSIONAL QUALIFICATIONS OF

HOWARD R. ARNOLD

My name is Howard R. Arnold, I have been an Instrumentation Installation Engineer for the Howard P. Foley Company at the Diablo Canyon Nuclear Power Plant for the last six and one-half years. I am responsible for all instrumentation installation activities, procurement, inventory, development of instrumentation QC procedures, valve and mechanical rotating equipment maintenance, welding qualification to ASME requirements, and supervision of all instrumentation engineering personnel.

I have a BS in Environmental Engineering from California Polytechnic State University at San Luis Obispo, California.

From 1973 through 1977 I worked for S&Q Construction Company, South San Francisco, California. I held several positions of increasing responsibility from Draftsman to Project Engineer. As a Project Engineer, I was responsible for supervising the instrumentation engineering staff at Diablo Canyon. My duties included review and approval of drawings and material purchase orders as well as writing instrumentation and valve maintenance QA procedures.

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PROFESSIONAL QUALIFICATIONS OF

DONALD A. BACKES, JR.

My name is Donald A. Backes, Jr. I have 12 years of experience as a Pipefitter/Welder at the Diablo Canyon Nuclear Power Plant, the last 5 years with H.P. Foley Company. Among the welding and brazing tests I successfully completed while at Foley are the following:

- 6" diameter carbon steel to stainless steel gas tungsten arc welding
- 1" thick plate in the vertical and overhead positions
- copper brazing
- stainless steel brazing

I completed a five year apprenticeship in 1977 as a Pipefitter/Welder. The course, given by the State of California, included both classroom instruction and practical welding experience.

Prior experience as a Pipefitter/Welder at Diablo Canyon began with Pullman Power Products (formerly M.W. Kellogg), where I began my welding apprenticeship. Between 1972 and 1974, while at Pullman, I successfully tested on stainless steel stick welding, 2" diameter open butt gas tungsten arc welding, in addition to the tests mentioned above under my Foley experience.

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From 1974 through 1975, I was employed by Wismer and Becker at Diablo Canyon. I continued with my apprenticeship and in 1974 qualified on carbon steel with backing ring in the 6G position.

From 1975 to 1978, I worked for S&Q Construction Company, during which time I completed my apprenticeship.

From 1978 through early 1979, I worked with Bechtel at the San Onofre Nuclear Power Plant. While there I tested on 1/2" open butt stainless steel to qualify as an instrumentation welder.

I began working for H.P. Foley in April 1979.

PROFESSIONAL QUALIFICATIONS OF

FRED C. BREISMEISTER

My name is Fred C. Breismeister. I am Manager of the Research and Engineering/Materials and Quality Services (M&QS) group in Bechtel's San Francisco Area Office. In this position I supervise and provide consulting services to the Diablo Canyon Project. I am a Registered Professional Quality Engineer in California.

My educational background is as follows: BS, 1962, and MS, 1964, in Metallurgical Engineering, Rensselaer Polytechnic Institute, New York.

Prior to my duties as Manager in M&QS, I was supervisor of the Welding Engineering Section, where I was responsible for the development and technical content of Bechtel welding procedures and field fabrication standards, as well as technical support and direction to engineering and construction regarding welding, heat treatment, fabrication, inspection, and code problems.

I joined Bechtel in 1972 as a Metallurgical/Welding Engineer. I am an AWS D1.1 Certified Welding Inspector and a member of the American Welding Society, the Structural Welding Code Subcommittees 2 and 3, and the Preheat Task Force and Toughness Testing Task Group.

I also served as Senior Mechanical Engineer for various other nuclear power facility projects in the United States and abroad, which included work in systems, safety, and equipment engineering.

I have been an instructor in Bechtel's power plant courses for over 10 years and have given numerous talks and lectures in California on nuclear power and energy issues.

PROFESSIONAL QUALIFICATIONS OF

DANIEL R. CADY

My name is Daniel R. Cady. I joined Bechtel Group, Inc. in May 1981 as a Senior Engineer. I am currently assigned to Bechtel's Research and Engineering/Materials and Quality Services Department and am qualified to function as NDE Level III. I am responsible for implementing and maintaining Bechtel's NDE Training and Certification Program for approximately 300 NDE personnel. I also review vendor NDE procedures and certifications, and provide assistance to all Bechtel projects in Nondestructive Examination. In January of 1983, I was assigned as NDE Group Supervisor.

I attended Prince George's Community College in Largo, Maryland. Included in my industrial education is attendance at the Nondestructive Inspection School in the U.S. Army, completion of nondestruction examination courses at Stone and Webster Engineering Corporation, and AMA-Supervisory Management courses at Transamerica Delaval.

I am a member of the American Society for Nondestructive Testing.

I served in the United States Air Force from February 1968 through February 1972. I was a Technical Instructor in Nondestructive Inspection at the USAF Technical Training Center, at Chanute AFB, Illinois.

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From November of 1972 to June 1974, I was employed by Stone and Webster Engineering Corporation. I was employed as a QA Engineer in their Nondestructive Test Division. On this assignment, as an Instructor in the training section, I developed related classroom and laboratory training programs. Included in my duties as Instructor, I performed specialized field inspections in all NDT methods and reviewed vendor NDT procedures. I am certified in accordance with SN-TC-1A in radiography, liquid penetrant, magnetic particle, and ultrasonic test methods.

In October of 1974, I joined Transamerica Delaval-Engine and Compressor Division, in Oakland, CA. As a Supervisor, Quality Control-Nondestructive Examination, I was responsible for quality control in Delaval's casting facility. In addition, I was responsible for shipping and receiving inspection, tool and gauge inspection and all Nondestructive Examination. I also supervised 16 technicians and inspectors and functional as Delaval's NDE Level III.

While at Deleval, from November 1978 through May 1981, I was appointed Manager of Quality Engineering-NDE Level III. I was responsible for QA/QC aspects of the various nuclear contracts and the implementation of Delaval's Quality Assurance Program for compliance with ASME, ANSI, and 10 CFR 50 Appendix B requirements.

PROFESSIONAL QUALIFICATIONS OF

PAUL S. DAWSON

My name is Paul S. Dawson. I am employed by Pullman Power Products, which is responsible for installing piping and related components at Diablo Canyon Nuclear Power Plant. I am in the Nondestructive Examination Department (NDE), and I began my employment at Pullman in 1978.

My initial duties consist of performing Level II unltrasonic, liquid penetrant, and visual examinations, as well as training in radiographic and magnetic particle inspections of these components. During the spring of 1979, I was certified in magnetic particle inspections of these components. During the spring of 1979, I was certified in magnetic particle testing, and responsibilities increased to include the supervision of eight technicians performing magnetic particle and ultrasonic examinations in support of the rupture restraint repair program. I was also certified as Level II in radiographic examination in 1980, and as Level III in nondestructive examination in May 1982. The NDE Department currently has 12 technicians under my supervision. I have held this position since 1978.

In June of 1974, I received a BA in Industrial Arts from the San Diego State University.

From 1974 to 1978, I was an Ultrasonic Inspector of the Carpenter Technology Corporation in California. Assigned to the Special Products

Division, I was responsible for ultrasonic testing involving use of immersion and contact transducers for both flow and wall thickness inspection. Most of the testing was on high quality nuclear components, including control rods, fuel clodding and zirconium fuel channels. I also acquired experience with visual, dimensional, and liquid penetrant nondestructive testing.

PROFESSIONAL QUALIFICATIONS OF

ALFRED A. ECK

My name is Alfred A. Eck. Since February 1979, I have been the Director of Quality Assurance, Quality Engineering Group, at Pullman Power Products' Home Office in Williamsport, Pennsylvania. I am currently assigned to the Mechanical Construction Department where I am responsible for all of Pullman's mechanical QA activities during construction of four nuclear power plants, including Diablo Canyon. Additionally, I supervise all of the Home Office Project QA Engineers assigned to these four plants.

I hold Level III certification by the American Society for Nondestructive Testing in radiography, magnetic particle, and liquid penetrant testing. I have completed a course for radiation safety and protection officers at Diano Corporation and have qualified as a Level II radiographer at the Kodak School of Radiography. I am a registered Professional Quality Engineer in California. I hold memberships in the ANS, ASMI, ASNT, ASQC, and SME.

I began my career in QA/QC in 1955 with Armour Leather Company. From 1961 through 1969, I was a QC Manager at Vidmar, a sheet metal products storage cabinet manufacturer.

For five years (1969-1974), I was the QA Engineer for Anchor/Darling Valve and Manufacturing Company, a valve and valve component manufactuer for the nuclear industry. I was responsible for assuring code compliance and assisting numerous inspections and audits (internal, vendor, NRC, ASME).

From 1974 through 1976, I was Upgrading Division Manager for Anchor/ Darling where I was responsible for upgrading valve components and assemblies to meet ASME, Section III, V, and IX requirements. I also had responsibility for welder and weld procedure qualification and training of all radiographers.

I began working for Pullman Power Products in September 1976 as QA Engineer in Williamsport to the Perry Nuclear Power Plant Project.

PROFESSIONAL QUALIFICATIONS OF

RONALD G. FINK

My name is Ronald G. Fink. I am Vice President of Reactor Controls, Inc., based in West Palm, Florida, and I have held this position since July of 1977. In this role, I am responsible for corporate management, including QA, QC, and NDE programs.

I have taken extensive engineering and business management courses, as well as piping and welding engineering technology. I have also completed technical courses in ASNT magnetic particle penetrants, and leak testing; ASNI radiography, levels I and II, and ASME qualification of nuclear engineering specialists. I am a member of ANSI, ASME, and AWS.

I began my professional career as a metallurgical lab technician at Ledoux and Company.

From late 1964 to mid-1968, I was employed by Isotopes, Inc., New Jersey, as a technician. Throughout this position, my duties included field NDE inspection of piping and maintenance of various testing equipment at the AEC test site in Nevada.

Between mid-1966 to mid-1968, I was employed by Ebasco as an NDE Technician and a Senior NDE Technician/Welding Inspector.

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From mid-1968 to mid-1970, I was a construction engineer. In this position, I was responsible for all Kellogg AEC and state radioactive material licenses, preparation of NDE procedure for all field projects, and development of NDE welding and inspection programs for both field and shop personnel.

From July 1970 through April 1971, I was QA/QC Manager for Pullman's West Coast operations responsible for establishing and organizing a QA/QC program.

I was employed for three years by the M. W. Kellogg Company, at their Avila Beach, California office. Between early 1971 and 1974, as field QA/QC Manager, I organized their west coast QA/QC program, then was assigned to the Diablo Canyon Nuclear Project jobsite, from March 1971 to March 1974, where I organized and managed the project QA/QC piping program.

Before assuming my current position, I was employed by Nuclear Installation Services Co. of New Jersey, as Manager QA/QC. From March 1974 to July 1977, I was responsible for all QA, QC, and NDE functions of the company.

PROFESSIONAL QUALIFICATIONS OF

EDWARD F. GERWIN

My name is Edward F. Gerwin. I am Vice President, Quality Assurance, of Pullman Power Products Corporation, Williamsport, Pennsylvania. I assumed this position in December of 1978. My duties include: overall responsibility for the company's quality assuarance program at the firm's fabrication plants and various construction sites. I also review the company's activities to ensure compliance with applicable codes and direct development and implementation of our quality assurance program.

I hold a BS degree in Mechanical Engineering from the University of Rochester, obtained in 1947. I have also taken numerous technical and management courses. I am a Registered Professional Engineer, mechanical engineering, Pennsylvania; and quality engineering, California. I am also a licensed mechanical contractor in Florida, Utah, and South Carolina.

I hold memberships in the following professional societies:

American Society for Quality Control
American Society for Nondestructive Testing
American Society for Metals
American Society of Testing Materials
American Society of Professional Engineers
American Society of Mechanical Engineers
American Welding Society

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I began my professional career as a Field Engineer/Chief Field Engineer employed by the M. W. Kellogg Company (Pullman Power Products). I also held various engineering positions and that of Chief Engineer. During the above period, from 1947 to 1975, my duties included ensuring that the company's fabrication of piping and related materials complied with client drawings, specifications, and applicable codes.

In March 1972, I was appointed Chief Engineer responsible for engineering on various contracts for fabrication facilities in Williamsport, Pennsylvania; Houston, Texas; and Paramont, California.

In October of 1975, as Chief Engineer for Pullman/Kellogg, I was responsible for special engineering projects. I continued in this position through April of 1977.

From May of 1977 through December of 1978, I was appointed Director. Essentially I began many of my current duties in this position.

PROFESSIONAL QUALIFICATIONS OF

DONALD R. GESKE

My name is Donald R. Geske. I am Lead Maintenance QC Inspector in the Nuclear Plant Operations Department in the Nuclear Plant Operations Department of the Pacific Gas and Electric Company. I am currently assigned to the Diablo Canyon Nuclear Power Plant. I supervise mechanical, electrical, instrumentation and controls inspectors in the inspection and surveillance of preventive maintenance, scheduled and unscheduled maintenance, and surveillance of all nuclear plant equipment. My reporting staff consists of 12 inspectors.

I am also responsible for the inspection planning, scheduling of the inspections, review of the inspection results, and monitoring documentation input to the records management system. I have held this position since January 31, 1983.

I attended Orange College in California for one year and have taken various technical and management courses.

I served in the United States Air Force from June 1955 to September 1975 in the following positions: Draftsman, NDE Technician, NDE Technical Training Instructor, NDE Courses Supervisor, and Metalworking Superintendent.

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Following my discharge in October 1975, I joined Pullman Power Products as an NDE Technician assigned to the Diablo Canyon Power Plant. After 18 months, I spent one year as an NDE Supervisor/Assistant QA Manager, then two years as a Field QA Manager. During the above assignments, I was responsible for coordinating and directing all activities associated with nondestructive examination, and implementing corporate/Project Quality Assurance and Quality Control Program.

From July 1980 to November 1981, I was Quality Control Supervisor at Seabrook Station, responsible for all quality control schedules. I was also responsible for ensuring that only qualified personnel were assigned to perform activities and that the activities were properly documented as work progressed.

In November 1981, as Level III Examiner and Training Engineer, I was assigned to the corporate office of Pullman Power Products, Mechanical Construction Operations. In this position, I was responsible for evaluating and qualifying written nondestructive examination, inspection and testing, and Quality Assurance Engineering Project Procedures. I continued in this position until January 1983.

PROFESSIONAL QUALIFICATIONS OF

JOHN S. GUYLER

My name is John S. Guyler. I have been employed by Pullman Power Products as a Lead Auditor since January 1983. My principal responsibilities are to conduct internal audits of Pullman's QA program for fabrication and erection. Audits are conducted in accordance with Pullman's QA Manual and ESD-263, which encompass the 18 point criteria of 10 CFR 50. I am a Registered Professional Safety Engineer in the State of California.

My educational background is as follows: AA degree in Mechanical Engineering from Long Beach City College; completion of most undergraduate requirements for a BS in Mechanical Engineering from Long Beach State; additional technical courses in welding metallurgy, pressure vessel design, and fabrication, inspection, and non-destructive examination of welded pressure vessels.

From 1947 to 1957, I was employed by Southwestern Engineering Company as a boilermaker. I worked in all phases of pressure vessel construction and repair, including welding, fit up, layout, assembly, and testing.

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From 1957 to 1963 I was a shop QC Inspector with Southwestern Engineering Company. As such, I was responsible for all phases of nondestructive examination of vessels for ASME code compliance.

From 1963 to 1982, I worked for the State of California in a variety of inspection capacities, the majority of the time in the nuclear industry.

From 1963 to 1972, I was responsible for the inspection of boilers and other pressure vessels in shops and at field construction sites to determine ASME compliance. Also, I inspected in-service boilers and other pressure vessels for compliance with State of California safety orders.

From 1972 to 1976, I was the resident Authorized Nuclear Inspector (ANI) at Diablo Canyon Nuclear Power Plant where I was responsible for installation of piping and related components in compliance with ASME. I also participated in audits and surveys required by ASME and the State of California.

From 1976 to 1977, I was assigned by the state as ANI to several manufacturing firms where valves, pumps, piping systems, and vessels were fabricated. Again, I participated in audits and surveys and assured ASME compliance during manufacture.

From 1977 to 1979, I was a resident ANI at the San Onofre Nuclear Power Plant where my duties were similar to those I performed eariler at Diablo Canyon.

In March 1979, I assumed the additional responsibilities of ANI Supervisor and In-Service Inspector. My duties expanded to include supervision of other ANIs assigned to the San Onofre jobsite.

I began my employment with Pullman in December 1982 and was certified by Pullman as a Lead Auditor in January 1983.

PROFESSIONAL QUALIFICATIONS OF

HAROLD W. KARNER

My name is Harold W. Karner. I have worked for Pullman Power Products for nearly ten years. For the past three and one-half years I have been Pullman's QA/QC Manager at the Diablo Canyon Nuclear Power Plant. I have overall responsibility for implementing the requirements of Pullman's QA Manual at Diablo Canyon. I also have the responsibility for training and certifying all Quality Assurance and Quality Control personnel.

I have satisfied the education, training, and testing requirements to be certified as Level III Inspector in the following activities: receiving, in-process, final, tool and gauge, welding, visual, and leak testing. In QA engineering, I am certified at Level III in the following quality functions: materials engineering, process engineering, welding engineering, and records maintenance. I am also certified at Level III in nondestructive examination for radiography, magnetic particle, liquid penetrant, and visual methods. I completed two and one-half years of study at Purdue University where I majored in Engineering and Industrial Management. I have been an AWS certified Welding Inspector since 1979.

Prior to working with Pullman, I worked in bakery goods production and food manufacturing. Among responsibilities was maintaining adherence to industry and company specifications.

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From 1974 to 1978, I held several increasingly responsible positions for Pullman at the E.I. Hatch Nuclear Power Plant, Units 1 and 2. I began as a QA Inspector and NDT Technician for nuclear piping. I then became a QA Welding Engineer responsible for welding procedures, welder qualification, and maintaining QA records. In my last position at Hatch, as Welding Supervisor, I was responsible for assuring compliance with ASME and ANSI codes in addition to Pullman and client procedures and specifications. I also established a welder qualification program.

In 1978, I was reassigned to the Vogtle Nuclear Power Plant, Units 1 and 2, as Assistant QA/QC Manager, where I remained for over a year.

Between November 1979 and August 1980, I was Assistant QA/QC Manager at Diablo Canyon, during which time I was also Acting QA/QC Manager.

I became Pullman's QA/QC Manager at Diablo in August 1980.

PROFESSIONAL QUALIFICATIONS OF

ROBERT DIXON KERR, JR.

My name is Robert Dixon Kerr, Jr. I am a welding engineer employed by Pacific Gas and Electric Company, based in San Francisco. I am presently assigned in the Department of Engineering Research, responsible for the development and implementation of the PGandE welding control system. The welding control system assures that technically accurate welding procedures which meet applicable codes are developed and properly applied. The system also controls the qualification and testing of welders and welding operators. I assumed this position in April of 1979.

I received a BS in Welding Engineering from Ohio State University in 1967. I am a Registered Professional Engineer in the state of Ohio and an AWS Certified Welding Inspector.

I began my engineering career in June of 1967 at Babcock and Wilcox (B&W), as a Senior Metallurgist in Research and Development. I held this position through May 1970, at which time I was promoted to Section Head, Weld Quality Assurance, in the Power Generation Group. I was primarily responsible for asuring that proper welding procedures were adhered to. I maintained this position for two and one-half years.

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In January of 1973, I was named Manager of Welding Quality Control, in the Industrial and Marine Division. As Manager, I was responsible for all welding performed by the division. I also implemented new shop control systems to meet 1974 ASME requirements for procedure qualification and weld procedure documentation.

In December of the same year, I became Section Head of Welding Engineering in Nuclear Export Operations. This was a three year assignment, concerned primarily with responsibility for all welding of a pressurized water reactor for a European customer.

I was named Manager, Weld Technology, in November of 1976. On this assignment, I was responsible for the technical direction of all welding activities ofthe Mt. Vernon works of B&W. I held this position for two and one-half years.

PROFESSIONAL QUALIFICATIONS OF

ROBERT T. KNOWLES

My name is Robert T. Knowles. I have been employed by the H.P. Foley Company and assigned to the Diablo Canyon Nuclear Power Plant for nine years. I am currently a Staff Engineer in Foley's Electrical Engineering Department where I am responsible for electrical quality control, disposition of nonconformance reports, document deficiency notices, and closeout and turnover of work packages and documents.

I graduated with a BA degree from California Polytechnic State University at San Luis Obispo, California.

From 1975 through 1978, I was a Senior Field Clerk for Foley and was responsible at one time or another for virtually all aspects of field documentation, including inspection reports, drawings, procedures, logs, rosters, and transmittals.

From 1978 to 1983, I was first an Engineer trainee and then an Engineer. In the latter capacity, I was responsible for all Foley electrical engineering functions at Diablo Canyon. This included preparation of work packages for production and responsibility for all conduit changes and circuit determination for modifications.

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During 1983, I was Foley's Electrical Project Engineer responsible for all Electrical Engineering Department personnel. I established engineering policy and developed quality control procedures.

I became Staff Engineer on January 1 of this year.

PROFESSIONAL QUALIFICATIONS OF

GARY D. LARSON

My name is Gary D. Larson. I have been employed by Pullman Power Products for eleven and half years. I have been Supervisor of the Nondestructive Examination (NDE) Department at the Williamsport Fabrication Plant since August 1982. I am responsible for interpreting all codes, standards, and specifications with respect to materials and fabrication; writing NDE procedures and revisions for the Williamsport plant and field sites; reviewing subcontractors procedures; and training and qualification of all Levels I and II Williamsport personnel.

I am a certified Level III NDE Technician for radiography, ultrasonic, magnetic particle, and liquid penetrant methods.

My prior experience with Pullman began in 1972 when I was an NDE Technician.

From January 1977 to August 1982, I was the Assistant Supervisor of the Williamsport NDE Department. My duties included assigning work to the NDE technician and interpreting film of all welds on piping assemblies. I also set up an NDE department and trained personnel in NDE and radiation safety at Pullman's Mexico City office.

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PROFESSIONAL QUALIFICATIONS OF

FRANK J. LYAUTEY

My name is Frank J. Lyautey. I have been continuously employed by Pullman Power Products for more than 15 years, the last year and a half as an Assistant QA/QC Manager at the Diablo Canyon Nuclear Power Plant. In my present position, I am responsible for the supervision of all QA/QC personnel involved with visual inspection, welding inspection, nondestructive examination, receiving, leak testing, calibration, rod room, and documentation review. I am an AWS Certified Welding Inspector.

I have completed training at Lincoln Electric Welding School, 1966, Cleveland, Ohio and at the Technical Operations Radiation Safety School, 1974, Burlington, Massachusetts. I now hold or previously held level I certification in welding engineering and level II inspection certification in the following areas: leak test, visual, welding, receiving, final, dimensional, in process, and component support.

Prior to my present duties at Diablo Canyon, I worked for five years in gas well and pipeline maintenance.

From 1964 through 1968, I was employed by Joyce Western, Inc., Andover, New York, as a Pipeline Welder.

I began my career with Pullman Power Products in November 1968 as a Journeyman Welder in the Williamsport, Pennsylvania, fabrication shop.

From 1972 through 1978, I was a Welding Inspector for Pullman and was under contract to Fitspatrick Nuclear Power Station and to Georgia Power's E.I. Hatch Plant. My responsibilities included material verification, fit up and welding of major piping systems, hangers, instrumentation, restraints, and anchors.

In 1979 I was assigned to the Vogtle Power Plant where my primary duty was certifying welders to ASME Section IX. I also returned to the Hatch Plant in Georgia to serve as a Welding Consultant to set up a welding inspection program, and to supervise welder qualification.

From 1979 through 1982, I was assigned to the Perry Nuclear Project as an Electrical Supervisor in charge of all pre-heating, stress relieving, welding machines, welding grid systems, and all temporary electrical work. In September 1981, I was assigned to dry well, containment areas as QC Welding Inspector with duties similar to those at the Hatch Plant. In January 1982, I became QC Supervisor in charge of all welding, hanger, receiving, and visual inspectors. I was additionally responsible for all welder qualification and implementation of all Pullman QC procedures.

I assumed my present responsibilities at Diablo Canyon in September 1982.

PROFESSIONAL QUALIFICATIONS OF

MICHAEL S. MacCRAE

My name is Michael S. MacCrae. I am a Training Officer employed by Pullman Power Products Corporation. I am presently assigned to the Diablo Canyon Nuclear Power Plant. I have held this position from November of 1982. My responsibilities include training, testing, qualifying, and certifying QA and QC personnel, and maintaining and reviewing personnel files. I have also been Radiation Safety Officer responsible for implementing the Radiation Safety program and all aspects of the Radioactive Material License. My duties have included training and evaluating radiographers and radiographer assistants, conducting unannounced audits of radiographic operations, and revising the Radiation Safety Manual, as required.

I am qualified in accordance with Pullman Power Products Training and Qualification Procedures and am authorized to function as NDE Level III in RT, MT, PT, and VT.

I hold a BS degree in Zoology (minor in Chemistry) from the University of Rhode Island. My technical training includes courses in Technical/Operations (Radiation Safety) and General Dynamics (Radiation Safety and Magnetic Particle Inspections).

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I am a member of ASNT and the American Welding Society.

In April 1976, I joined General Dynamics - Electric Boat Division of North Kingston RI as a QC Inspector qualified and authorized to function as Level II RT and MT. I held this position through April 1978.

The following May, I was employed as a QC Inspector qualified as Level II RT, MT, PT, and VT certified in accordance with SNT-TC-1A. I was responsible for inspection of reactor internals in accordance with ASME Section III, hydrostatic testing precision measurements, and training NDE trainees and Level I personnel on the job.

From May 1978 to August 1979, I was employed by Combustion Engineering-Avery Division as a QC Inspector.

Prior to my current assignment, from August 1979 to November 1982, I was also NDE supervisor while employed by Pullman. I organized and maintained the NDE department, administered practical examinations in all NDE methods to NDE personnel, coordinated inspection operations with other contractors, and ensured all inspections complied with applicable Codes. While in this position, I was Radiation Safety Officer qualified as NDE Level III, RT, MT, and PT.

PROFESSIONAL QUALIFICATIONS OF

JOHN K. McCALL

My name is John K. McCall. I am employed by Bechtel Power Corporation. Since May 1982, I have been assigned to the Diablo Canyon Project as the Unit 1 Civil Group Supervisor. As supervisor of 350 engineers and designers, I am responsible for the design and review of all civil/structural items. I have also performed review, analysis, and design for plant structures, electrical raceway and HVAC supports, modifications, and I have completed a major redesign of the water supply and sanitary systems.

I hold BS and MS degrees from the University of California, Berkeley. I am a Registered Civil Engineer in California and a Registered Professional Engineer in Florida.

I have sixteen years of experience as a civil/structural engineer, the last seven years on nuclear projects and the last five years as a supervisor.

From 1968 through 1971, I was employed by Kaiser Engineers on a variety of commericial and industrial buildings.

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PROFESSIONAL QUALIFICATIONS OF

CHRISTOPHER M. NEARY

My name is Christopher M. Neary. I have been employed by Pullman Power Products since July 1981. I am presently employed as a QA Welding Engineer in the Quality Engineering Group at Pullman's home office in Williamsport, Pennsylvania. I am responsible for selection, preparation, qualification, revision, and maintenance of welding and brazing procedures for all field sites, including Diablo Canyon. Additional duties include assuring that welding and brazing procedures meet code and customer requirements; providing technical backup for field sites on welding, brazing, and metallurgical problems; and interfacing with customers on procedure and specification difficulties.

I am a graduate of Ohio State University with a BS in Welding Engineering, 1981.

I was employed by Westinghouse in the summer of 1979, during which time I created a preventive maintenance program for welding equipment, assisted in data collection and report writing, and designed special welding equipment.

During the summer of 1980, I was employed by the Tennessee Valley Authority as an Engineering Aide at the Bellefonte Nuclear Power Plant. My duties encompassed procedure qualification to AWS and ASME Codes, filler metal control, and QA surveillance. I also performed visual inspection of non-code piping and concrete pour preparations and maintained weld maps and documented progress of a priority system.

I started working with Pullman Power Products in July of 1981.

PROFESSIONAL QUALIFICATIONS OF

DONALD A. ROCKWELL

My name is Donald A. Rockwell. I am employed by Pacific Gas and Electric Company (PGandE) as Special Projects Engineer at Diablo Canyon Nuclear Power Plant. I have been with PGandE for nine years and in this position since March 1984. My responsibilities include researching allegations, drafting responses to allegations, and other special projects as assigned by the Field Construction and Startup Manager.

I have completed the 38 week technical training course at the Electronic Technical School at Great Lake Training Center in 1959. I have completed the 52 week technical training course at Electronic Technical School in 1962 at Treasure Island Naval Training Center. I have completed the Naval Nuclear Power Training School in 1963 at U.S. Naval Vallajo Training Center at the U.S. Naval Reactor Training Facility located Ballston Spa, New York.

My prior work experience included eight years in the U.S. Navy: three years as an Electronic Technician, and five years as a Nuclear Technician and Reactor Operator on various nuclear power submarines.

From March 1966 until July 1967, I was employed by PGandE at The Department of Engineering Research. My responsibilities included design of testing equipment and performing tests on various thermal power plants prior to commerical operation.

From July 1967 to December 1969, I was a Field Engineer for PGandE Station Department responsible for installation and testing of substations relaying, computers, high voltage capacitor banks and subsynchronous generator controls, and system testing of 55 mega watt hydro units.

From January 1970 until December 1974, I was employed by The Multi Amp Test Service Corporation as Field Testing Supervisor responsible for testing and startup of reactor heat removal, low pressure coolant and high pressure coolant, rod control systems, reactor protective systems, and reactor sequence control systems on General Electric 1100 mega watt BWR reactors.

In January 1975, I returned to PGandE as a Technical Subforeman. My duties included setting and testing of protective relaying at Diablo Canyon Power Plant.

In January 1976, I assumed the position of Dry Run Test Supervisor responsible for development and performance of test procedures of all control schemes at Diablo Canyon Power Plant.

In February 1977, I assumed the position of Electrical Installation Group Supervisor responsible for installation and construction testing of electrical systems at Diablo Canyon Nuclear Power Plant.

In August 1978, I assumed the position of Electrical Resident Engineer at Diablo Canyon Nuclear Power Plant responsible for all construction activities performed by the H. P. Foley Company, such as Instrumentation and Controls (I&C), electrical installation, and contract management.

In October of 1982, I assumed the position of Assistant Construction Manager responsible for supervising all aspects of construction at Diablo Canyon Nuclear Power Plant.

In July 1983, I assumed the position of Project Field Engineer responsible for all site material procurement and resolution of construction design problems at Diablo Canyon Nuclear Power Plant.

PROFESSIONAL QUALIFICATIONS OF

R. KEITH RHODES

My name is Keith Rhodes. I am Technical Services Supervisor with the General Construction Station Department Instrument and Control (I&C) Group. I have held this position since January 1, 1980. I am currently assigned to the Diablo Canyon Project Startup Department and am responsible for directing activities of the Instrument and Control Group.

My educational background is as follows: As degree in electronics, Cuesta College, San Luis Obispo, California, 1976.

During the period from June 1980 until May 1983 I was assigned to the Technical Services I&C Group in Emeryville, California. I was responsible for supervising the I&C personnel at various job sites on work assigned to General Construction Station Department, including the Diablo Canyon Project, Geysers Project, and Helms Project.

I was made a Field Engineer in 1975 and was responsible for supervising activities of the Diablo Canyon General Construction I&C Group. I was also responsible for directing contractor instrument installation and valve maintenance work.

In 1972 I was made a General Construction Technical Subforeman and assigned the responsibility of directing the contractor, S&Q Construction

From 1967 until 1970 I was self-employed.

I initially joined PGandE Easy Bay Division in 1962 and was an Apprentice Instrument Repairman at the Pittsburg Power Plant.

PROFESSIONAL QUALIFICATIONS OF

FORREST M. RUSSELL

My name is Forrest M. Russell. I am employed by Pacific Gas and Electric Company (PGandE) as a Resident Engineer. I am assigned to the Diablo Canyon Nuclear Power Plant working on Special Projects. I began working on the above assignment in March 1984.

I have a total of 38 years of construction experience, the last 14 of which were spent at the Diablo Canyon Nuclear Power Plant.

I was first employed in 1946 by Martin & Grace and subsequently by L.P. Reed-Martin & Grace, Falcon Dam Constructors, and Morrison-Knudsen Co. Before the latter, from 1953 to 1955, I served in the U.S. Army. In all of the above, I was primarily involved with surveying, scheduling, railroad construction, and construction of the Falcon and McCloud Dams. While in the Army, I was Chief Construction Surveyor for the Northwestern Alaska air bases.

I began working for Pacific Gas and Electric Company (PGandE) in January of 1957. My employment at PGandE spans almost 27 years. I have held various positions with increasing responsibilities. For example, as Party Chief, I was responsible for contract administration for construction including excavating, concrete, surveys, and inspections to assure compliance with drawings and specifications.

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In 1970, I was assigned to the Diablo Canyon Nuclear Power Plant, as Party Chief, responsible for all project surveys. In 1975, I was named Inspector A and held this position until March 1981. In 1976, I was also Acting Resident Civil Engineer responsible for all civil activities, including engineering and construction. I was also Construction Coordinator for all civil activities under the direction of a Resident Engineer for the Hosgri, responsible for all field activities. In April 1979, I was again Acting Resident Civil Engineer, responsible for all civil engineering and production. In March of 1981, I was promoted to Resident Engineer and continued performing the above duties until just recently.

PROFESSIONAL QUALIFICATIONS OF

LAWRENCE E. SHIPLEY

My name is Lawrence E. Shipley. I am a Technical Consultant to the piping program at the Diablo Canyon Project. I have held this position for sixteen months. My primary responsibility is in the review of piping systems to licensing commitments and newly developed seismic criteria.

My educational background includes the following: BS in Mechanical Engineering, U.S. Merchant Marine Academy, New York, 1965.

I joined Bechtel Power Corporation's San Francisco Power Division in 1967 in the field of piping stress analysis. My responsibilies included technical direction of 150 engineers and designers on projects that included nuclear and fossil-fired power plants and the liquid metal fast breeder reactor at the Fast Flux Test Facility at Richland, Washington.

In 1981, I became the Assistant Project Engineer on the Susquehanna Steam Electric Station in Pennsylvania, responsible for engineering in the civil-structural, architectural, and piping and plant design areas. The work I directed included: structural analysis review of all Seismic Category I buildings, piping/stress analysis review of all Seismic Category I buildings, piping/stress analysis and pipe support design, valve qualification, welding and NDE, and materials selection and qualification.

In 1982, I was appointed Technical Consultant to the Diablo Canyon Project for the piping program.

In 1983, my duties were expanded to include those of Assistant Chief Engineer for Plant Design in the San Francisco Power Division.

PROFESSIONAL QUALIFICATIONS OF

MICHAEL R. TRESLER

My name is Michael R. Tresler. I am the Assistant to the Unit 1 Project Engineer on the Diablo Canyon Project, consisting of the integrated organization of Pacific Gas and Electric Company and Bechtel Power Corporation. In this position I am responsible for assisting the Project Engineer in directing all engineering on the unit with the exception of licensing-related efforts and other special activities. I have also been associated with the Project as Resident Mechanical Engineer, Project Superintendent, Assistant Station Construction Superintendent, Project Control Engineer, and Piping Design Coordinator.

My educational background is as follows: BS in Mechanical Engineering, California Polytechnic State University, 1964.

I joined PGandE in 1964 and performed pipe analysis and support design, and construction inspection, design, and startup of large fossil-fired units.

In 1969, I spent a year participating in the startup and initial testing of the R.E. Ginna PWR Plant in Rochester, New York.

In 1970, I became PGandE's Lead Engineer in the piping design and quality assurance areas.

I joined the Diablo Canyon Project in 1972 as Resident Mechanical Engineer, becoming Project Superintendent in 1977.

In 1979, I spent a year as Assistant Station Construction Superintentent with responsibility for Diablo Canyon and miscellaneous fossil-fired construction work.

In 1980, I returned to Diablo Canyon as Project Control Engineer and was appointed Piping Design Coordinator in 1981 with the responsibiliy for controlling all piping and support design work on the Project.

I assumed my present duties in October 1983.

PROFESSIONAL QUALIFICATIONS OF

JON P. WATSON

My name is Jon P. Watson. I have worked for ten years with Pullman Power Products at the Diablo Canyon Nuclear Power Plant. I am presently a QC Welding Supervisor responsible for testing and qualification of welders in accordance with ASME Section IX and AWS D.1.1. I am also responsible for all welder qualification records, periodic in-process audits of welders, and ascertaining welder requalification requirements. My duties include the review and revision of procedures and specifications, the testing and qualification of welders to ASME Section IX, as well as review and revision of Pullman manuals and specifications.

I now hold Level II inspection certification in the following activities: visual, welding, and dimensional.

The majority of prior work experience between 1959 and 1974 involved vehicle inspection for routine maintenance, repair, and detection of manufacturer defects.

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From 1974-1977, my principal assignments with Pullman were as a nuclear systems quality analyst, hanger and rupture restraint documentation verifier, and valve inspector. These duties included inspection of weld completeness and verification that piping configuration, valve repair, and final bolt torquing met specification, procedural, and ASME and ANSI Code requirements. I also qualified and worked as a dimensional and hydrotest inspector.

From 1978 to 1980, as Field QC Inspector, my duties included the inspection of pipe welds per ASME B.31.1 and B.31.7, hanger and rupture restraint welds per ASME, ANSI, and AWS codes.

I assumed my present duties in January 1980.

PROFESSIONAL QUALIFICATIONS OF

LLOYD R. WILSON

My name is Lloyd R. Wilson. I joined H.P. Foley Company in April of 1983 as Quality Director, assigned to the Diablo Canyon Nuclear Power Plant. I am responsible for developing, implementing, and controlling the Project Quality Assurance Program.

I attended Brevard Junior College, in Cocoa, Florida, where I obtained an AA in Industrial Management. I also attended Florida State University, in Tallahassee, Florida, and received a BS in management in 1973.

Between 1967 and 1973, I was employed by McDonnell Douglas Corporation as an Electronics Technician and a QA representative. In the latter position, I participated in analysis and redesign of quality control and production control systems, and designed the computerized configuration control system. In 1973, I was Management Systems Analyst at Florida State University where I conducted complete detailed analysis of their methods and procedures.

Following the above, I was employed in 1974 by J. A. Jones Construction Company, assigned to the corporate office in Charlotte, North Carolina. I was Senior Quality Assurance Engineer, after which followed various positions.

In 1975, I was Quality Assurance Supervisor at Surry Nuclear Steam Generating Station, Units 3 and 4, Surry, Virginia. I was Project Quality Assurance Manager the following two years and subsequently Assistant Project Manager. I held the above two positions while assigned to Waterford Unit 3, in Taft, Louisiana.

I was Project Manager both at the Black Fox Station, Units 1 and 2, in Inola, Oklahoma (July 1978 to January 1980) and at Spurlock Power Station Number 2 in Winchester, Kentucky (January through July 1980).

Following the above, I was named Project Manager in July 1980 for the Ocoee Number 2 Project (TVA) in Benton, Tennessee. My next assignment began in February 1982 at WNP 1/4 Nuclear Power Projects in Richland, Washington, responsible for implementing all facets of the Project Quality Assurance Program. I held this position through April 1983.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
	)	
PACIFIC GAS AND ELECTRIC COMPANY	)	Docket No. 50-275
	)	Docket No. 50-323
Diablo Canyon Nuclear Power Plant, Units 1 and 2	)	
	)	

CERTIFICATE OF SERVICE

The foregoing document(s) of Pacific Gas and Electric Company has (have) been served today on the following by deposit in the United States mail, properly stamped and addressed:

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Chairman
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US Nuclear Regulatory Commission
Washington, DC 20555

Judge Glenn O. Bright
Atomic Safety and Licensing Board
US Nuclear Regulatory Commission
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Date: March 19, 1984

* Copies delivered by Courier.