



FPL

United States Nuclear Regulatory Commission Official Hearing Exhibit	
In the Matter of:	FLORIDA POWER & LIGHT CO. (Turkey Point Nuclear Generating Units 6 and 7)
Commission Mandatory Hearing	
Docket #:	05200040 05200041
Exhibit #:	FPL-009-MA-CM01
Admitted:	12/12/2017
Rejected:	
Other:	
Identified:	12/12/2017
Withdrawn:	
Stricken:	

FPL-009

Paul R. Jacobs

EDUCATION

B.S. in Nuclear Engineering, State University of New York, Maritime College, New York
Graduate Courses towards Masters Degree, Nuclear Engineering, New York University

LICENSES & CERTIFICATIONS

Professional Engineer - State of California
U.S. Coast Guard - Third Assistant Engineer

SUMMARY OF QUALIFICATIONS

Forty five years of experience in the power generation industry as a design engineer, consulting engineer and independent business owner.

PROFESSIONAL EXPERIENCE

Florida Power & Light
New Nuclear Project
Engineering Supervisor

May 2006-Present

Performed initial reviews of all proposed reactor types being considered for the new nuclear project contemplated by Florida Power & Light.
Engineering lead for preparation of licensing documents submitted in support of obtaining federal and state permits including final safety analysis report (FSAR) and environmental report (ER) submitted to the Nuclear Regulatory Commission (NRC) and the Site Certification Application (SCA) submitted to the State of Florida. Continuing support to respond to requests for additional information (RAI's) from the NRC and responses to completeness questions from state and local agencies.

Turkey Point Nuclear Plant

January 2006-May 2006

Member of the Life Cycle Management Team, provided assistance to the Maintenance Department, Instrumentation and Control, in support of design modification to the feedwater control system. Specific activities included review of the plant design modification for replacement of the feedwater control valve (main and bypass) control system with digital positioners, revision of all maintenance procedures to incorporate required changes and development of new procedure for calibration of the positioners and position sensors using hand held communicator or valve link software.

Developed new procedure for performing dynamic testing of the feedwater control system to optimize feedwater control system parameters.

Completed procedure upgrades for conversion of Copes Vulcan valve actuators from D100 to D1000. Developed new procedure for the inspection and overhaul of Anchor Darling double disc gate valves. Provided general support for the revision of maintenance procedures to incorporate feedback and corrective actions. Reviewed and provided input to plant modification for the Feedwater Pump Recirculation Flow Transmitter Replacement project.

Paul R. Jacobs

Indian Point Nuclear Plant, Units 2 & 3

January 2003-November 2005

I&C Power Uprate Project Engineer

Provided assistance to the Indian Point 2 and 3 Maintenance Instrument and Control Department in the preparation, technical review and revision of Technical Specification Surveillance Procedures, Technical Requirement Manual and Offsite Dose Calculation Manual Surveillance Procedures and Instrument Calibration Procedures. During this assignment, Indian Point 2 and 3 implemented a power uprate program. Was assigned as the Instrument and Control representative to interface with the Power Uprate Project Management and the Design Engineering Department to evaluate the required instrumentation hardware and software changes. Was also responsible for revising the Surveillance and Calibration Procedure for the required uprate changes.

Performed a review of Surveillance Test procedures as part of the Design Basis Initiatives Project. The project objective was to determine if the I&C surveillance procedures were in compliance with the design basis requirements (UFSAR, Technical Specification and Licensing Commitments). The procedure review included a comprehensive review of the purpose statements, conduct of the test and test acceptance criteria to assure that there was a well defined and documented basis. The review also included the impact of the newly implemented Improved Technical Specification on the surveillance test performance.

Energy and Environmental Management Corporation 1985-2000

President

The company provided services to the utility industry and to the energy conservation market. Was directly involved in providing services to the nuclear utility industry and was responsible for several major projects as described below.

Indian Point Nuclear Plant, Unit 2

June 2001-December 2002

Inservice Test Engineer

Responsible for performing Inservice Testing (IST) Program related tasks.

- Review, revision and issuance of ASME pump and valve surveillance tests.
- Issuance of quarterly, cold shutdown and refueling valve tests.
- Review and evaluation of valve and pump tests for compliance with ASME Section XI and Technical Specification requirements. Perform pump and valve analyses and prepare 96 hour evaluations.
- Review of Post Maintenance Tests and establishment of reference values.
- Maintain B&C Leak Monitoring System Running Total.
- Maintain External Recirculation Leakage Running Total.
- Incorporate plant changes into IST Basis Document and prepare IST Program for submittal to the NRC.
- Maintain IST Augmented Program.
- Maintain 10CFR50 Appendix J administrative and test procedures and database.
- Provided outage related engineering support for testing of valves and pumps during cold shutdown and refueling.

Paul R. Jacobs

Indian Point Nuclear Plant, Unit 2

July 1998-June 2001

IST Assessment Engineer

Prior to the role of IST Engineer, Mr. Jacobs led a multi-disciplined team that performed a comprehensive re-evaluation of the existing Inservice Test Program (IST) Program at Indian Point 2. The review was performed in accordance with the requirements of ASME/ANSI OMa 1988 Addenda to ASME/ANSI OM-1987 and NUREG-1482. The review encompassed all valves and pumps in ASME and non-ASME support systems that provide safety related functions to establish the basis for including or excluding components from the IST Program. The review resulted in the development of an IST Basis Document and a revision to the IST Program that was submitted to the Nuclear Regulatory Commission (NRC) and reviewed without comment.

The effort also included the development of a computerized IST Program Database to capture design and licensing basis information for each component covered by the review team. The database maintains surveillance test information for pumps and valves and is used for trending and analysis of component performance.

Indian Point Nuclear Plant, Unit 2

July 1997-June 1998

Project Engineer

Performed a review of the Indian Point 2 Snubber Program. This effort included the review of all of the historical record for the visual and functional testing of all snubbers, development of a management data base, revision of all snubber procedures and resolution of outstanding Quality Assurance Audit items.

Indian Point Nuclear Plant, Unit 3

January 1997-June 1997

Design Basis Engineer

Was part of the design engineering group performing design basis and licensing analysis to determine the safety function and safety classification of mechanical and electrical components.

J.A. Fitzpatrick Nuclear Plant

November 1996-December 1996

Design Engineer

Was assigned to the J.A. FitzPatrick plant as part of a special design-engineering group assembled to assist station management in the performance outage related and general station activities. Included were preparation of nuclear safety evaluations, preparation of design calculations and review of engineering documents prepared by discipline engineers.

Indian Point Nuclear Plant, Unit 2

July 1996-November 1996

Safety & Licensing Engineer

Provided assistance to the Indian Point 2 Nuclear Safety and Licensing Department. Also provided assistance to Nuclear Safety and Licensing Manager in the performance of management and technical activities. Included was NRC interface, preparation of 10CFR50.59 analyses, Licensee Event Reports preparation, resolution of outstanding technical and licensing issues, review and revision to department procedures and response to Quality Assurance audits.

Paul R. Jacobs

Energy & Environmental Management Corp. January 1996-June 1996
Energy Conservation Business Development
Participated in the development of the energy conservation business for Energy and Environmental Management Corporation. The company signed and implemented a marketing and engineering agreement with a major Northeast utility to provide energy conservation services. The company provided services to private, municipal and governmental clients in New York State and other states in the Northeast. .

Indian Point Nuclear Plant, Unit 2 June 1991-December 1995
Project Engineer
Member of the team performing the Component Declassification Evaluation Project for Con Edison's Indian Point Unit No. 2 Nuclear Power Station. This project involves the evaluation of over five hundred selected safety related components, parts and commodities to determine if the item could be declassified. This effort involves a detailed review of plant systems, operating and emergency procedure and the review of Commercial Grade Dedication packages.

Also supervised a Service Water Pump operation and maintenance review and an analysis of the lubrication requirements for several thousand components.

Acted as the Project Coordinator for design engineering projects being performed for NYPA Indian Point 3 associated with Cataract's off-site engineering support contract. Mr. Jacobs was also involved in the preparation of dedication packages to support the 1992 refueling Outage.

Indian Point Nuclear Plant June 1988-June 1990
Led a multi disciplined team responsible for performing an analysis of all safety and safety-related systems to identify the required operation in response to various plant events. The purpose of the analysis was to evaluate the effect of the failure of various mechanical components on the ability of the system to perform its intended function. The program resulted in recommendations to management regarding the inclusion of components in the inservice testing program.

Susquehanna Nuclear Station February 1986-September 1986
EAL Project Engineer
Was a member of the project team that prepared the Emergency Action Level (EAL's) for PP&L's Susquehanna Station. The EAL's were prepared in response to the issuance of NUMARC/NESP-007 report entitled "Methodology of the Development of Emergency Action Levels". The project involved a complete rewrite of the existing EAL's and included a detailed review of operating and emergency procedures.

Comanche Peak Nuclear Power Plant November 1985-January 1986
Assistant Chief Engineer
Involved in the Design Adequacy Program for Comanche Peak Nuclear Power Plant. His responsibilities included review of system design against applicable design criteria, including design documentation, NSSS specifications, design drawings, NRC regulations, single failure criteria, pipe rupture, etc.

Paul R. Jacobs

Impell Corporation 1973-1985

Vice President and Northeast Region Manager

Responsible for the overall operation; complete responsibility and authority for the technical, administrative and financial aspects of the operation. The office had in excess of 150 engineers and clerical staff and generated over 15 million in annual revenues.

Prior to this position, was Manager, Systems Engineering and Management Services Division for Impell and has extensive experience in the engineering, design and licensing aspects of commercial nuclear power plants. Responsible for the management of mechanical engineering, pipe support, structural design and analysis, systems engineering, design review, licensing and quality assurance projects for utility and engineering clients.

Mr. Jacobs and the engineering staff were responsible for developing a methodology for analyzing plant system response to various initiating events. The methodology, Safety Sequence Analysis, was used by utility clients to verify system design (mechanical, electrical, I&C, etc.) and to evaluate the ability of the plant to respond to pipe break events, single failure criteria (active and passive) and environmental considerations.

Had a staff of over 70 professionals assigned to the Systems Engineering and Management Services Division and his overall coordination of division and project activities included technical review of work, client liaison, division and project budget and schedule control.

Was the Project Coordinator for a five (5) year effort at the Shoreham Nuclear Power Station during its construction. Managed a group of twenty five (25) engineers and designers involved in the layout and design of mechanical systems, large bore and small bore piping and support design and conduit and conduit support design.

Ebasco Services, Inc. 1968-1973

Principal Mechanical/ Nuclear Engineer

Was a Principal Mechanical/ Nuclear Engineer for a large architect-engineering firm. As Lead Mechanical Job Engineer and Project Engineer on several large Nuclear Power Plant Projects was responsible for the preparation of detailed system designs, design and analysis of manufacturer equipment proposals for the reactor, auxiliary and steam conversion system.

As Project Engineer on the Chin-Shan Nuclear Power Station, responsibilities included cross-discipline coordination of licensing and engineering activities. His duties also included responsibility for work assignments and review of all mechanical work on the project.

As Mechanical Nuclear Engineer on Tsuruga Nuclear Power Station, Vermont Yankee Nuclear Power Station and WPPSS Nuclear Project No. 3, his duties included total technical responsibility for the design of safety related engineering activities.

Assignments also included preparation and review of the PSAR, ER and State Application for the WPPSS Nuclear Project. During the early WPPSS Project stages, his assignments included NSSS evaluations, site studies and conceptual design.

Military Sea Transportation Service 1966-1968

Coast Guard Licensed Third Assistant Engineer

Performed duties of a Third Assistant Engineer on a United States merchant vessel. Responsible for the operation of the main steam boilers and propulsion systems and ship auxiliaries. Performed maintenance activities on ships engineer room equipment.

PROFESSIONAL AFFILIATIONS

American Nuclear Society

American Society of Mechanical Engineers