

Bechtel Power Corporation

Engineers—Constructors

Fifty Beale Street
San Francisco, California

Mail Address: P.O. Box 3965, San Francisco, CA 94119



50-461

October 9, 1984

BLI-20

Mr. J. D. Geier
Illinois Power Company
500 South 27th St.
Decatur, Illinois 62525

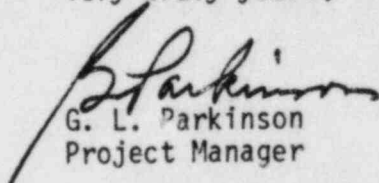
Subject: Clinton Independent Design Review
Illinois Power Company
Job No. 15478-003
Program Plan July 1984, Transmittal of Resumes

Dear Mr. Geier:

Enclosed are additional resumes for personnel who have joined the Review Team since the submittal of the original issue of the Program Plan in July 1984.

Additional resumes will be sent to you as they are finalized.

Very truly yours,


G. L. Parkinson
Project Manager

GLP:scr

Attachments

cc: Service List

8410180067 841009
PDR ADCK 05000461
A PDR

Clinton Power Station

Independent Design Review
Standard Distribution List

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Chicago, Illinois 60606

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Washington, D. C. 20036

Robert Brodsky
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Rosslyn Center, Suite 825
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after 9/24/84

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Annandale, Virginia 22003

I. H. Sargent
Westec Services Inc.
100 North 20th St.
Philadelphia, PA 19103

Rev. 2
10/8/84 (CWD)

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List of Resumes transmitted with BLI-20, October 9, 1984

M. Aslam
W. E. Borisch
S. S. Chan
L. S. Chiong
B. S. Chopra
E. M. Greene
P. C. Gupta
M. L. Haney
E. E. Heinz
J. G. Hook
W. Hopstock
D. A. Hull
R. L. Jindal
D. H. Kim
J. R. Magnuson
J. A. O'Brien
R. B. Parodi
T. R. Passmore
S. C. Saha
P. K. Smith
G. A. Tuveson
G. Vandra

MOHAMMAD ASLAM

POSITION Engineering Supervisor

EDUCATION PhD, Civil Engineering, University of California, Berkeley
MS, BS, Civil Engineering, Washington State University
BS, Agricultural Engineering, West Pakistan Agricultural
University
Certificate, Bechtel Supervisory, Bechtel Power Corporation

PROFESSIONAL DATA Registered Professional Engineer, California
Publication of six technical papers in ASCE journals

SUMMARY 1 1/2 years: Engineering Supervisor, Group Leader
4 years: Senior Engineer
5 years: Associate Development Engineer
2 years: Assistant Research Specialist
3 years: Research Assistant
1 year: Senior Lecturer

EXPERIENCE Presently, Dr. Aslam is an Engineering Supervisor responsible for the scheduling, evaluating, review and technical guidance of the Equipment Qualifications Group which has performed qualification analyses for equipment and structures at Limerick, Susquehanna, Hope Creek, and Diablo Canyon Nuclear Power Plants. The group is comprised of ten engineers. Structural response and equipment qualification were analyzed according to static, thermal, seismic, hydrodynamic, and nozzle loads. Complex mechanical or electrical equipment was tested according to IEEE 344 requirements. Stress analyses were done using computer codes including soil or fluid structure interactions. Dr. Aslam has also coordinated with and reviewed vendor testing as well as finalizing equipment packages for NRC audits.

Prior to his supervisory responsibilities, Dr. Aslam as a Senior Engineer for the Mark I and Mark II project, participated in analysis of fluid-structure interaction problems; soil-structure interaction analysis; buckling analysis of complex shell structures; and data reduction and analysis for safety relief valve discharge tests. As Senior Engineer at the Trojan Nuclear Plant, Dr. Aslam performed static and dynamic analysis of complex structures including soil-structure and fluid-structure interactions using the following computer programs: NASTRAN, STARDYNE, SAP, ADINA, STRUDL, STAGS, FLUSH, FESS and SPECTRA.

As Associate Development Engineer at the University of California, Dr. Aslam was involved with structural model studies to develop more economical design criteria for box-girder bridges and he also developed a Finite Element Theory to predict thermodynamic pressures in Mark I and Mark II suppression pools.

September 1984

WERNER E. BORISCH

POSITION Chief Construction Engineer

EDUCATION BS, Civil Engineering, State College for Civil Engineering and Surveying (Germany)

PROFESSIONAL DATA State of Michigan Boiler Installer License Class J
State of Michigan Boiler Repairer License Class VI

SUMMARY 2 years: Chief Construction Engineer
2 years: Project Contracts Manager
12 years: Project Field Engineer
2 years: Senior Field Engineer
2 years: Field Engineer
1 year: Design Engineer

EXPERIENCE Mr. Borisch is currently the Chief Construction Engineer for Bechtel Power Corporation's Ann Arbor Power Division. He is responsible for the organization and supervision of operations in the areas of construction engineering, controls, manpower training, orientation, and development. He also provides and/or coordinates and monitors timely support services to assist various construction projects.

As the Project Contracts Manager for Detroit Edison's Belle River project, 2-650 MW coal-fired units, Mr. Borisch provided project direction, assistance, and coordination to those project functional groups responsible for contract formation and issuance.

Prior to this assignment, Mr. Borisch was the Project Field Engineer with overall supervisory responsibilities for all field engineering activities on the following projects:

1-800 MW oil-fired steam electric power plant,
Detroit Edison's Greenwood project;

2-600 MW coal-fired steam electric power plant,
Pacific Power and Light Company's
Centralia project;

2-600 MW coal-fired steam electric power plant,
Union Electric Company's Labadie project.

As a Senior Field Engineer and Field Engineer, Mr. Borisch was responsible for erection, installation surveillance, and technical field support for all civil/structural work on the 360 MW coal-fired steam electric power plant for Consumers Power Company located in West Olive, Michigan, and the 66 MW coal-fired steam electric power plant, Unit 3, for Otter Tail Power Company at Fergus Falls, Minnesota.

During his assignment as a Design Engineer, Mr. Borisch was involved in the layout and design of the San Francisco/Bay Area Rapid Transit System.

STANLEY S. CHAN

POSITION Senior Engineer

EDUCATION BS, Mechanical Engineering, Rice University
MS, Nuclear Engineering, University of Michigan

PROFESSIONAL DATA Registered Professional Engineer, Michigan

SUMMARY 4 years: Senior Engineer
1-1/2 years: Safety and Licensing Engineer
3-1/2 years: Safety and Transient Analysis Engineer

EXPERIENCE Presently, Mr. Chan is Senior Engineer, working on the environmental qualification of safety-related electrical equipment. As part of his duties, he has performed the following functions:

- a. evaluated component functions and system interactions to determine the environmental qualification requirements of safety-related components;
- b. developed an optimum approach to qualify equipment with qualification deficiencies;
- c. prepared technical analyses to qualify various equipment
- d. prepared specifications for equipment testing;
- e. prepared purchase requisitions and/or design change packages for components to be replaced or relocated; and
- f. designed shielding for equipment not qualified for post-accident radiation levels.

He also prepared and evaluated technical analyses in support of reload licensing, technical specification changes, and plant modifications; participated in various TMI Lessons Learned Owners' Group activities, including the development of small break LOCA emergency procedure guidelines and the rewriting of small break emergency procedures for the Oyster Creek Plant; and prepared safety evaluations and made presentations to the NRC.

Mr. Chan supervised as well the full scale mockup testing and subsequent modification of the Big Rock Point Plant emergency core cooling system; performed LOCA and HELB pipe break studies for the Palisades and Big Rock Point plants using the RELAP 4 computer code; performed fuel inspections at the Palisades Plant; supervised and participated in in-vessel work at the Big Rock Point Plant; prepared design criteria and design change packages for modifications of NSSS as well as BOP systems for Monticello and Pilgrim Unit 1; and was shift technical advisor at the Oyster Creek Plant.

September 1984

LUIS S. CHIONG, SR.

POSITION Resident Engineer

EDUCATION Certificate, Technical Course Electrical UST Philippines

SUMMARY 11 years: Electrical Designer
3 years: Electrical Drafter

EXPERIENCE Mr. Chiong is currently a Resident Engineer at the Monticello, Minnesota jobsite for Northern States Power Company. He is responsible for identifying cable tray and conduit interference for recirculation pipe modification. He has performed plant walkdown to as-built raceways and cable installations. He has prepared raceway layout and circuit schedules for various HVAC and reactor feedwater pump seal system modification projects. He prepared raceway layout design sketches for alternate shutdown systems and battery charger upgrade projects to aid San Francisco Home Office Engineering in final raceway design.

Previously, Mr. Chiong was a layout designer for Hitachi and Mitsubishi nuclear plant projects in the San Francisco Power Division. He was responsible for the design and construction of the cable tray layout model for the Hitachi project and all electrical raceway design for the Mitsubishi project.

Mr. Chiong was the layout and circuit and raceway scheduler on the Susquehanna nuclear power plant project. His responsibilities included conduit and tray design and cable routing.

He was extensively involved in field walkdowns, verification of raceway routing, and documentation of as-built conditions. He also prepared design change packages.

Earlier, Mr. Chiong was a Senior Drafter on the Trojan project. In this position, he provided assistance to engineers and designers.

Prior to joining Bechtel, Mr. Chiong was a textile designer at International Textile Mill, Manila, Philippines.

September 1984

BALJIT S. CHOPRA

POSITION Senior Engineer

EDUCATION BS, Electrical Engineering, Osmania University, India
MS, Electrical Engineering, University of Wisconsin

PROFESSIONAL DATA Registered Professional Engineer, Illinois and Michigan

SUMMARY 4 years: Senior Engineer
6 years: Engineer
2 years: Lead Electrical Design Engineer

EXPERIENCE Mr. Chopra is currently a Senior Engineer working on the environmental qualification of safety-related electrical equipment for the Dresden and Quad Cities nuclear power stations. His responsibilities include work related to implementation of NRC IE Bulletin 79-01B, which covers analysis of equipment located within harsh and nonharsh environments. His specific tasks include the selection of components for prototype testing, development of detailed test procedures, and coordination of work with testing laboratories and equipment vendors. Mr. Chopra has also conducted thermal aging analyses using the Arrhenius equation, radiation aging analysis, and equipment loading analysis.

Previously, Mr. Chopra worked as a Group Leader for the nuclear steam supply system (NSSS) schemes panel modifications and connection group on the Midland Nuclear Project, Units 1 and 2. This assignment included completion of design work on NSSS schemes, preparation of connection lists, and panel modifications. He supervised 15 engineers, designers, and draftpersons.

Earlier, Mr. Chopra worked as a Schemes Engineer for safety-related systems on Farley Nuclear Units 1 and 2.

He was also an Electrical Systems Design Engineer for Greenwood 1, an oil-fired unit for Detroit Edison. He worked on the design of the auxiliary power distribution system, prepared specifications and schemes, and provided engineering support to construction.

Prior to joining Bechtel, Mr. Chopra was a Lead Electrical Design Engineer with Monsanto Enviro-Chem Systems, Chicago, Illinois. His work included design of power distribution systems, physical layout, controls, instrumentation, and engineering support to construction.

September 1984

ERIC MARKHAM GREENE

POSITION Senior Licensing Engineer

EDUCATION BS, Nuclear Engineering, Columbia University
MS, Nuclear Engineering, MIT

PROFESSIONAL DATA Professional Nuclear Engineer, California

SUMMARY 3 years: Senior Licensing Engineer
8 years: Senior Engineer
5 years: Power Engineer

EXPERIENCE Mr. Greene is currently a Senior Licensing Engineer on the Bechtel San Francisco Power Division engineering staff. He served as a licensing support member of the Byron Independent Design Review Team, reviewing the Sargent & Lundy design for Commonwealth Edison. He has participated in a number of significant studies and evaluations pertinent to radiological and environmental pathway analysis. These include offsite radiological dose assessments under normal and accident conditions for Limerick, Hope Creek, and Susquehanna nuclear power plants, and a high temperature, gas-cooled reactor. He also performed radiological dose analyses of the reactor cover gas system for an LMFBR, analyses of radiation zone dose, drywell radiation monitor systems, and doses inside enclosures and facilities from releases through various mechanisms for several LWR projects.

He also participated in a PWR-BWR quantity and cost comparison study which included the various radwaste systems and components. He contributed to bid specifications on spent fuel storage racks, and performed analyses on spent fuel decay heat and fuel pool boiling.

Previously, Mr. Greene was assigned to the licensing area within the Nuclear Group of the Limerick project. He was responsible for coordinating the preparation, printing, and submittal to the client of revisions to the Limerick FSAR, EROL, Emergency Plan, and other licensing documents. He prepared responses to NRC questions and FSAR revision on special topics such as aircraft crash probability, tornado missiles, explosions, unresolved safety issues, toxic chemicals, control room habitability, and environmental issues.

Previously, for 5 years, Mr. Greene was involved with environmental and fuel economic analyses including fuel cycle radiological assessment at Westinghouse Hanford. He was involved with fuel cycle activities for the LMFBR, including fuel cycle costs, economic development, scheduling, and interactions with the LWR fuel cycle. He also performed studies for the LWR fuel cycle on shipment of spent fuel and

ERIC MARKHAM GREENE (Continued)

EXPERIENCE
(Continued)

alternatives to recycle, investigated LWR fuel fabrication economics and facility capital costs, and was involved in studies investigating the condition of discharged LWR fuel for the conceptual design of a fuel receipt and storage facility.

At General Atomic, Mr. Greene marketed HTGR fuel in the U.S. and the Asia - Pacific area. He was responsible for providing nuclear fuel technical liaison between GA International, its partners and licensees in Europe and Japan, and the various fuel groups of GA Company, and providing technical support for HTGR sales efforts. He was involved with all areas of the nuclear fuel cycle, supply and costs for ore, enrichment, safeguards, shipping, fuel cycle computer codes and fuel bids, as well as commercial aspects, fuel patents, exports, and all GAI fuel ventures and agreements. He was also responsible for preparing and coordinating all nuclear fuel proposals, and fuel pricing. He developed a computer code to calculate nuclear fuel profitability and risks on escalated and present-worth bases for all fuel services offered.

Previously, for 5 years, Mr. Greene was a Power Engineer in the Power (Nuclear) Division of Stone & Webster Engineering Corporation in charge of the Nuclear Fuel Group. He was responsible for continuing fuel management development, and obtaining and operating a system of computer codes for fuel management and reactor core analysis. He participated in proposal evaluations and performed various studies involving fuel cycle cost calculations for major utility corporations. Mr. Greene developed nuclear fuel cycle cost codes for fuel evaluations.

PREM C. GUPTA

POSITION Senior Engineer

EDUCATION BS, Metallurgical Engineering, IIT, India
MS, Mechanical Engineering, South Dakota State University
Certificate, Nuclear Power Plant Design, Bechtel

PROFESSIONAL DATA Registered Professional Engineer, Michigan
Member, American Society of Mechanical Engineers

SUMMARY 3 years: Plant Design Group Leader
3 years: Project Engineer
4 years: Stress Engineer Group Leader
1 year: Engineering Analyst
2 years: Research Assistant
1 year: Engineer

EXPERIENCE Mr. Gupta is presently Group Leader in the plant design staff stress group of Ann Arbor Power Division. His responsibilities are to review and approve analyses and related documentation of ASME Section III, Nuclear Class 1, 2, and 3 piping systems and components and ANSI B31.1 power piping systems.

Prior to that, at Chrysler Corporation, Mr. Gupta was Project Engineer, responsible for design and analysis of door components. He coordinated these activities from the styling stage through design feasibility to the final product.

In Bechtel's San Francisco Power Division, Mr. Gupta was a Stress Engineer and Group Leader, responsible for analysis of Nuclear Class 2 and 3 and ANSI B31.1 power piping systems. He developed and defined procedures for analysis of Nuclear Class 1 piping systems and components.

Previously, at Sargent & Lundy Engineers, Mr. Gupta was an Engineering Analyst. He analyzed nuclear piping systems for static, seismic, and fluid transient loadings. He was involved in the design and analysis of penetration assemblies.

Earlier, he was a graduate research assistant, responsible for elastoplastic and plastic analysis of the stress fields in the vicinity of the crack tip. As a graduate engineer, he was responsible for mechanical and physical testing of casting and forging samples.

September 1984

MICHAEL L. HANEY

POSITION Civil/Structural Engineer
EDUCATION BS, Civil Engineering, University of Cincinnati
PROFESSIONAL DATA Engineer-in-Training, Ohio
Member, Chi Epsilon Civil Engineering Honor Society
SUMMARY 8 months: Civil/Structural Engineer
1-1/3 years: Plant Design Engineer

EXPERIENCE Mr. Haney is currently a Civil/Structural Engineer assigned to Consumers Power Company's Palisades/Big Rock Point project. In this position, he has been involved in the design of the technical support center addition to the Palisades nuclear plant and the extreme wind/tornado analysis of the Big Rock Point Nuclear Plant.

Previously, he was assigned to the seismic group on Consumers Power Company's Midland Units 1 and 2 nuclear project. Earlier, Mr. Haney was assigned to the pipe support group of Detroit Edison Company's Belle River Units 1 and 2 fossil project. He was first involved in the layout, design, and checking of pipe supports. Later, he became subgroup leader responsible for scheduling, coordinating, and reviewing the work of approximately 10 engineers and designers.

Prior to joining Bechtel in 1980, Mr. Haney spent 18 months as a cooperative student with the engineering design department of Ashland Oil, Inc. His duties included miscellaneous structural steel design, pressure vessel and pressure vessel foundation design, pipe stress analysis and pipe support design, and miscellaneous engineering, surveying, and inspection projects.

September 1984

ERIC E. HEINZ

POSITION Project Administrator

EDUCATION MA, Public Service/Management, Ball State University
BS, University of Maryland

PROFESSIONAL DATA Member, Nuclear Records Management Association
Member, American Records Management Association

SUMMARY 8 years: Project Administrator
1 year: Supervisor, Records Management
1/2 year: College instructor
4 years: USAF-Chief, Administrative
Communications/Publications
1 year: USAF Base Executive Officer
3 years: USAF-Assistant Chief of Publications/Chief,
Printing Plant
4 years: USAF-Chief of Administration
7 years: Various USAF Administrative Responsibilities

EXPERIENCE Mr. Heinz has served as Project Administrator for eight Bechtel fossil-fueled and nuclear power plant projects in the San Francisco Power Division. In this capacity, he planned and implemented administrative systems and procedures to support project teams; managed the operation of project document control centers; organized personnel and office space and acquired office equipment for projects from their inception; provided records management guidance, established chronological and technical files and creates a microfilming program for all documentation. Mr. Heinz prepared project administrative records for a successfully passed audit, conducted an audit of a water flood project control center, streamlined inhouse document processing, set up word processing centers as needed, and participated in needs analyses for personal computers. He developed and monitored budgets for administrative support groups and managed up to 180 administrative persons providing support to home office, jobsites and clients for the Diablo Canyon project. He has successfully undergone numerous management audits.

For six months Mr. Heinz taught college-level course in management and business to off-duty military personnel at various locations in Europe and Chicago.

For 20 years Mr. Heinz held numerous, progressively responsible positions with the U.S. Air Force to the rank of Major. He won two commendations for meritorious service for superior knowledge of administration and for leadership and effective use of resources, and two service medals for problem solving and managerial skills. As Chief of Administration in Weisbaden, he provided administrative services and guidance to 1350 persons in the headquarters and in 70 units scattered throughout Europe. As Chief of the Command's printing plant, Mr. Heinz directed operation of the plant, modernizing equipment and refining work procedures, effectively resolving

ERIC E. HFINZ (Continued)

EXPERIENCE
(Continued)

differences with the union, and achieving significant productivity improvements. As Assistant Chief of Publications, he was responsible for the Command's Publications Distribution Center. As Base Executive Officer, he directed and monitored personnel functions of staffing, pay, discipline, administration, and administrative security. As Chief of Administrative Communications, he formulated policy on communications, mail service, and printed materials. He improved mail services and expanded reproduction services without adding staffing and reduced publication processing time by 60%, eliminating a 6-month backlog. He mechanized several indices. As Chief of Publications, forms management, and forms distribution for all USAF offices in Europe, he managed a staff of 22 engaged in editing and distributing 75 new and revised monthly publications.

September 1984

J. G. HOOK

POSITION Senior Engineer

EDUCATION BS, Civil Engineering, Michigan Technological University
Certificate, Auditor Training, Bechtel
Certificate, Fossil Power Plant Design, Bechtel

PROFESSIONAL DATA Registered Professional Engineer, Michigan
Member, American Society of Civil Engineers

SUMMARY 2 years: Senior Civil/Structural Engineer
5-1/2 years: Civil/Structural Engineer
1-1/2 years: Quality Assurance Engineer
1 year: Quality Control Engineer
1 year: Assistant Quality Control Engineer

EXPERIENCE Mr. Hook is presently a Senior Civil/Structural Engineer on the Palisades Power Plant project, responsible for analysis and design of supports for cable trays, conduits and HVAC systems. He has resolved various field installation problems; evaluated Big Rock plant structures for tornado, wind and proximity missiles; and assisted in the analysis of the cellular slab and developed the specification for its repair.

Prior to that, Mr. Hook was assigned as Civil/Structural Engineer on a number of projects, including Palisades, Dresder, and Midland. His duties included analyzing blockwalls for various seismic and tornado conditions; designing structural steel and concrete members for an addition to an auxiliary building; implementing NRC Bulletin 80-11; assisting in development of a permanent dewatering system; developing and interpreting civil specifications and codes.

As Quality Assurance Engineer, Mr. Hook was responsible for all civil activities on "Q-listed" work, including audits, surveillance and procedure implementation.

Earlier, at Stone & Webster Engineering Corp., Mr. Hook was QC Engineer for Nine Mile Point Unit 2, responsible for all concrete preplacement and placement; Assistant QC Engineer for Shoreham Nuclear Power Station, responsible for concrete inspection in all Category II areas; and as Assistant QC Engineer on North Anna Power Station, responsible for structural steel erection and coating inspection.

September 1984

WILLIAM HOPSTOCK

POSITION Electrical Group Supervisor

EDUCATION AS, Electrical Engineering, College of Marin,
1 year, San Francisco State University,

SUMMARY 6 years: Engineering Supervisor
6 years: Senior Design Engineer
7 years: Engineering Designer

EXPERIENCE Mr. Hopstock is currently Assistant Group Leader on the Hope Creek project, an 1100 MW BWR for Public Service of New Jersey with primary responsibility for licensing criteria involving electrical separation and construction interface with QC. Previously, he was the Electrical Group Supervisor on the Hitachi Cost Reduction Study for BWR power plants. He was responsible for all electrical and control systems work regarding the technology transfer of current NRC licensing requirements.

Prior to that, Mr. Hopstock was the Layout Group Leader on the Susquehanna Steam Electric Station - 1100 MW BWR for Pennsylvania Power and Light Co. This work included responsibility for detailed layout design, licensing criteria (Regulatory Guide 1.75, 1.120, 10CFR50 Appendix R, Safety Analysis Report) for electrical separation and fire protection/safety hazard analysis. This work required interface with all other disciplines to ensure that the licensing requirements were satisfactorily incorporated into the final design.

Mr. Hopstock's power plant experience with Bechtel began in 1972. Prior to joining Bechtel, he worked for seven years as a designer of power plant/transmission/distribution control and relay boards for Pacific Gas & Electric Co. This work included Diablo Canyon Units 1 & 2, PWR, 1100 MW nuclear power plant, various fossil power plants, transmission/distribution substations and engineering/design standards.

September 1984

DENNIS A. HULL

POSITION Electrical Engineer

EDUCATION BS, Electrical Engineering, Purdue University

PROFESSIONAL DATA Engineer-In-Training Certificate, Indiana
Member, Institute of Electrical and Electronics Engineers

SUMMARY 3 years: Electrical Engineer
3 months: Electrical Technician

EXPERIENCE Mr. Hull is currently an Electrical Engineer in the Ann Arbor Power Division assigned to Consumers Power Company's Palisades project. He is designing electrical systems for modifications to the Palisades nuclear plant. His duties include writing specifications, performing calculations, and developing design drawings.

Prior to joining Bechtel in 1979, Mr. Hull was an electrical technician at the Donald C. Cook Nuclear Plant for Indiana and Michigan Electric Company. He was responsible for verifying field wiring before turnover to plant personnel.

September 1984

ROOP L. JINDAL

POSITION Senior Structural Engineer

EDUCATION PhD, Civil Engineering, Punjab University, India
MS, Civil Engineering, University of Illinois, Urbana
MS, Civil Engineering, Punjab Engineering
College, Chandigarh, India, 1958
Certificates - BSAP, NASTRAN, ANSYS, STRUDAL, SPECTRA,
STARDYNE, Bechtel Power Corp., San Francisco

PROFESSIONAL Registered Professional Civil Engineer, California
Member, American Concrete Institute
(Committee 544-Fiber Reinforced Concrete
and 277-Nuclear Waste Management)
Member, American Society of Civil Engineers
Publication of 12 research papers, 2 textbooks,
2 research reports, 2 manuals
Awarded Certificate of Merit by Institution
of Engineers (India) 1984 and by Bechtel, 1983

SUMMARY 3 years: Senior Structural Engineer
6 years: Associate Professor of Civil
Engineering, Consultant
16 years: Assistant/Associate Professor,
Consultant

EXPERIENCE Presently, Dr. Jindal is a senior structural engineer in the
Equipment Qualification Group of Bechtel Power Corporation. He
has worked at Limerick Generating Station, Diablo Canyon and
Hope Creek Nuclear Power Plants. In this capacity he has
performed various structural analyses and tests using the ANSYS
program, AISC, ASME, and IEEE codes. Analyses include
fluid-structure interactions, time-history response, bridge
capacity, vibration and stress, safety of electrical panels,
dynamic and static tests, and fatigue evaluation. Dr. Jindal
has written test plans and specifications for safety-related
equipment and reviewed vendor analysis/test reports. He has
coordinated with project/field/procurement and has worked in
scheduling and estimating. He assisted Philadelphia Electric
Company in its SQRT and PVORT audit for safety-related
equipment at the Limerick Generating Station and conducted an
equipment field and control room walkdown for Hope Creek.

Prior to that, at Susquehanna Nuclear Power Plant, Dr. Jindal
was involved in structural evaluation problems related to the
identification of safety-related equipment, jet impingement
loads, finite element modelling, generation of response
spectra, and identification of seismic equipment.

ROOP L. JINDAL (Continued)

EXPERIENCE
(Continued)

In addition to teaching graduate and undergraduate courses at Punjab Engineering College, Dr. Jindal was involved in research work on fiber reinforced concrete and dynamic analysis and design of concrete buildings and bridges/towers/tanks. He set up experimental stress analysis and structural engineering laboratories.

At the University of Sulamania in Iraq, Dr. Jindal's work included teaching, setting up a graduate program and concrete experimental, stress analysis and structural engineering laboratories. He also designed buildings and investigated dams after an earthquake.

DAVID H. KIM

POSITION Mechanical Group Leader

EDUCATION BS, Seoul National University, Seoul, Korea
MS, University of California, Berkeley

PROFESSIONAL DATA Registered Professional Mechanical Engineer, California
Registered Professional Engineer, Korea

SUMMARY 3 years: Mechanical Group Leader
4 years: Senior Engineer
2 years: Mechanical Engineer
1 year: Assistant Engineer

EXPERIENCE Mr. Kim's most recent assignment was as a Senior Engineer in the Operating Plant Services Group of Bechtel Power Corporation in San Francisco. He was responsible for preparing Plant Design Change (PDC) packages for Pilgrim Unit 1 (BWR, 658 MWe) for Boston Edison Company.

Prior to that, Mr. Kim was acting Group Supervisor of the Mechanical/Plant Design Group on Gojeong Thermal Power Plants (Coal/Oil, 2X500 MWe) for Korea Electric Power Co. He was an expatriate engineer responsible for supervising detail engineering and resolving startup and plant completion problems.

Previously, Mr. Kim worked as Responsible Engineer for the turbine building on Diablo Canyon Units 1 & 2 (PWR, 2X1130 MWe) for Pacific Gas & Electric Co. He reviewed all mechanical design documents and approved field change notices. He also reviewed the design of major balance-of-plant systems in order to implement the NRC requirements related to the Three Mile Island incident.

Additionally, Mr. Kim worked as a Mechanical/Nuclear Engineer on Shearon Harris Units 1 through 4 (PWR, 4X900 MWe) for Carolina Power & Light Co. He developed systems thermal modes of operation and plant safe shutdown analysis in regard to high energy pipe rupture and jet impingement analysis. He also prepared amendments to the plant Safety Analysis Report in response to the NRC's requests for additional information.

September 1984

JAMES R. MAGNUSON

POSITION Electrical Engineer

EDUCATION BS, Electrical Engineering, Michigan Technological University
Certificate, Electrical System Protection and Relaying, Bechtel

PROFESSIONAL DATA Registered Engineer in Training, Michigan

SUMMARY 3-1/2 years: Electrical Engineer

EXPERIENCE Mr. Magnuson is currently working as an Electrical Engineer in the Operating Plant Services Department of Bechtel Power Corporation, Ann Arbor Power Division. He is responsible for the preparation and review of electrical equipment qualification and analysis packages for Detroit Edison's Fermi 2 Power Plant. His duties include the evaluation of test reports and standards, verification of reference material, and interface with the client and equipment manufacturers to resolve comments or problems with the qualification packages.

Prior to that, Mr. Magnuson was an Electrical Engineer on the Palisades project. His accomplishments include the design of schematic and connection diagrams for the safety-related control and instrumentation circuits associated with the heating, ventilation and air conditioning systems. He was also responsible for the procurement and installation of motor control and load centers installed for the auxiliary power system. Mr. Magnuson's early assignments on the Palisades Project included field walkdowns and verification of electrical equipment, control room heating studies, and participation in diesel generator load and sequence studies.

September 1984

JUDITH A. O'BRIEN

POSITION Cost Engineer

EDUCATION BS, Civil Engineering, University of Michigan
Certificates, Power Plant Construction, Introductions
to Power Plant Design/Scheduling/Home Office and Field
Cost Engineering, (Bechtel)
Certificate, Effective Negotiating (Karass Seminars, Inc.)

PROFESSIONAL DATA Engineer-In-Training, Michigan
Associate Member of American Society of Civil Engineers
Member of Society of Women Engineers

SUMMARY 2 years: Cost Engineer
1 year: Scheduling Engineer
1 year: Field Construction Engineer/Draftsperson

EXPERIENCE Currently, Ms. O'Brien develops estimates for proposals on international work; performs cost studies; and is responsible for cost and schedule controls on the Independent Design Review for the Clinton Nuclear Power Station. Previously, at the Colstrip power plant project, she was responsible for forecasting piping and instrumentation in quantities and labor unit rates. She maintained these same categories of statistics for the FOCUS reports. Ms. O'Brien supervised two technicians.

In the San Francisco Power Division, Ms. O'Brien was responsible for processing and tracking cost changes and preparing bid tabulations. During forecasts, she was responsible for developing mechanical material and labor costs, scoping design changes and making escalation calculations.

As Scheduling Engineer at the Colstrip power plant in Colstrip, Montana, Ms. O'Brien was responsible for implementing a computerized tracking program for the startup of Unit 3 and for developing a startup schedule for Unit 4. She was responsible for monthly construction and startup status reports to the client.

Prior to joining Bechtel in 1981, Ms. O'Brien performed field engineering site work for a contractor in Minnesota and worked as a draftsperson in the civil department of a design firm in Ohio.

September 1984

R. BEN PARODI

POSITION Senior Control Systems Engineer

EDUCATION Mechanical Engineering, 2 years, Heald Engineering College, San Francisco
Electronics, 2 years, San Jose City College
Nuclear Power Engineering, 1 year, General Electric Company, NED, Certificate of Completion

SUMMARY 2-1/2 yrs: Senior Control Systems Engineer
8 years: Senior Field Control Systems Engineer
3 years: Owner - Commercial Industrial Process Controls
1 year: Lead Instrument Field Engineer
2 years: Associate Engineer, Control Systems (Kaiser)
1 year: QA Resident Controls Engineer (Kaiser)
2 years: Instrument Field Superintendent

EXPERIENCE Mr. Parodi is presently a Senior Control Systems Engineer with the San Francisco Area Office assigned to the Limerick Nuclear Generating Plant. He provides information to resident engineering and construction to eliminate potential problems during initial systems testing. He also reviews set point data for system operating conditions. He recently spent six months at the Limerick jobsite as a Resident Engineer assisting the Home Office, Startup, Client and Field Construction in resolving instrumentation problems.

As Lead Controls Field Engineer on nuclear and fossil plants, Mr. Parodi directed systems installations and scheduled assignments for engineering groups. He was the only field controls engineer on several fossil power projects, and was responsible for rack design, instrument locations, material procurement and instrument installations. He was also startup liaison and consultant to the client's engineering at Rush Island and Colstrip Unit 1.

As a resident QA Controls Engineer with Kaiser Corporation, Mr. Parodi wrote construction standards and instrument specifications while supervising the William Zimmer Project QC inspection team. He wrote specifications for controls application to mechanical equipment purchase orders and coordinated controls standard specifications. He was the instrument field superintendent, responsible for construction on both nuclear and fossil projects.

September 1984

THEODORE R. PASSMORE

POSITION Plant Design Group Supervisor

EDUCATION Diploma, Structural Design, ITC Technical College of San Francisco

SUMMARY 3 years: Layout Group Supervisor
5 years: Deputy Group Supervisor
5 years: Piping Designer
2 years: Drafter

EXPERIENCE Mr. Passmore is currently the Plant Design Group Supervisor on Consumers Power Company's Palisades nuclear plant project. In this position, he supervises the technical design work and administration related to piping and HVAC duct layout, piping stress analysis, pipe detailing, and equipment layout. Earlier, he was the Design Layout Group Leader for the Palisades project.

Previously, Mr. Passmore was the Deputy Group Supervisor and Design Group Leader for the radwaste, fuel handling, auxiliary, and reactor buildings on Detroit Edison Company's Greenwood Nuclear Power Plant, Units 2 and 3. His responsibilities included administration and design layout of building and equipment arrangements, piping, HVAC ductwork, pipe stress analysis, and pipe support design and detailing.

Earlier, Mr. Passmore completed plant design assignments on the Midland, Hope Creek, and Vandalia projects.

Before transferring to the Ann Arbor office in 1972, Mr. Passmore was a lead designer at Bechtel's Gaithersburg Power Division, where he designed and checked piping systems and building and equipment arrangements for the Baltimore Gas and Electric Company's Calvert Cliffs Nuclear Power Plant and Ohio Edison's Davis-Besse Nuclear Power Plant.

Previously, Mr. Passmore was a layout piping drafter and designer with the San Francisco Power Division. He was assigned to four fossil fuel units.

September 1984

SUDAL C. SAHA

POSITION Group Leader

EDUCATION MS, Civil Engineering, Polytechnic Institute of New York
18 credits towards M.S. (Mech.) with major in stress & vibration

SUMMARY 5 years: Group Leader
1 year: Assistant Group Leader
1 year: Lead Engineer
1 year: Senior Engineer
2 years: Designer/Engineer

EXPERIENCE Mr. Saha's most recent assignment was as Group Leader for the Pipe Support Group for Diablo Canyon Unit 2, leading a group of 85 designers and engineers. He assigned work to each individual, evaluating individual capabilities for optimum quality performance, resolved all design and construction problems, reviewed and revised project procedures, instructions and memoranda as required. Mr. Saha also devised methodology and held seminars to acquaint the group with potential construction problems and analyzed ways to alleviate problems. He also formulated manpower requirements to cope with the changing needs of the project to meet schedule.

Prior to that, Mr. Saha was Assistant Group Leader, Pipe Support, on the Susquehanna project.

Previously, Mr. Saha was Group Leader for South Texas project, responsible for large bore pipe supports, working for Nuclear Power Services.

As Lead Engineer for Stone & Webster Engineering Corp., Mr. Saha was responsible for the pipe support activities on the Shoreham Nuclear Power Plant.

Prior to that, for Ebasco, Mr. Saha was Senior Pipe Support Engineer for Waterford and WPPS 3 projects and, for Public Service Electric and Gas Co., he was Pipe Support Design Engineer for Salem Nuclear Unit 1.

Earlier he was Design Engineer with Bergen Patterson.

September 1984

PAUL K. SMITH

POSITION Project Engineer

EDUCATION BS, Mechanical Engineering, Purdue University

PROFESSIONAL DATA Registered Professional Engineer, Michigan
Member, American Nuclear Society

SUMMARY 2 years: Project Engineer
1 year: Assistant Project Manager
13 years: Engineering Supervisor
6 years: Various Engineering Positions
9 years: U.S. Army

EXPERIENCE Mr. Smith is currently assigned as Project Engineer with the Operating Plant Services Group. He is responsible for engineering aspects of modifications and support activities for various operating nuclear plants.

Prior to that, Mr. Smith was (successively) Mechanical/Nuclear Group Supervisor, Project Engineer, and Assistant Project Manager for the Consumers Power Company's operating power plants. His responsibilities included modifications and support activities for operating power plants.

Earlier, Mr. Smith was the Team Leader for preparation of the Midland Nuclear Plant Final Safety Analysis Report.

Before that, Mr. Smith was (successively) Nuclear Group Leader for the Greenwood 2 and 3, Skagit, and Iowa Power nuclear projects with responsibilities for nuclear systems design and licensing activities.

Prior to that, Mr. Smith was an Engineering Supervisor for Babcock and Wilcox Company. His responsibilities included design and field service of reactor system components for commercial and U.S. Naval nuclear systems.

Earlier, Mr. Smith was Engineering Supervisor with Borg Warner Corporation with responsibility for design, manufacture, test, and field service of control rod drive mechanisms for the U.S. Navy.

September 1984

GORDON A. TUVESON

POSITION Engineering Supervisor

EDUCATION BS, Civil Engineering, Purdue University
MS, Structural Engineering, Purdue University
Graduate courses in structural engineering, University of Pittsburgh

PROFESSIONAL DATA Registered Professional Engineer, Illinois and Michigan
Member, American Society of Civil Engineers

SUMMARY 5 years: Engineering Supervisor
4 years: Group Supervisor
1 year: Group Leader
20 years: Power and Industrial Plant Experience

EXPERIENCE Mr. Tuveson is currently a member of the civil/structural staff in Bechtel's Ann Arbor Power Division. He is primarily responsible for project review. In addition, he does extensive consultation in structural areas and is a member of the fossil structural committee.

Previously, Mr. Tuveson was assigned to the Midland generating station as the Engineering Group Supervisor of the civil/structural group. A major portion of the plant was designed and constructed while he was the supervisor. Earlier, Mr. Tuveson was a Group Leader of auxiliary facilities on the Greenwood generating station. As Group Leader, he supervised the structural design of auxiliary facilities and preparation of a portion of the project specifications.

Prior to joining Bechtel, Mr. Tuveson had approximately 20 years of varied professional engineering experience. While working for other architect/engineer firms, he developed design criteria for concrete blockwalls, coal silos and bunkers, and chimney liner supports. He also was responsible for a power line route study across the Florida everglades.

Mr. Tuveson has also worked for a steel company where he was responsible for studies of preliminary design buildings, bridges, and shell structures. He developed a user computer program for the design of tubular transmission towers.

While working for a computer manufacturer, Mr. Tuveson was a computer programmer and developed the connection design phase routines of a structural drafting program.

During his employment with a steel tank fabricator, Mr. Tuveson designed various types of tanks and pressure vessels. He also designed foundations for all types of tanks.

Immediately after receiving his bachelor's degree, Mr. Tuveson served in the U.S. Navy Civil Engineering Corps as a Seabee officer in Japan and California.

September 1984

GIRDHAR VANDRA

POSITION Senior Engineer

EDUCATION MS, Structural Engineering, Brigham Young University, Provo, Utah

PROFESSIONAL DATA Registered Professional Engineer, New Jersey

SUMMARY 2 years: Pipe Support Staff Engineer/Group Leader
9 years: Senior Engineer/Group Supervisor
2-1/2 years: Consultant
1-1/2 years: Checker
3-1/2 years: Junior Engineer

EXPERIENCE Mr. Vandra's most recent assignment was as Lead Pipe Support Engineer on the Independent Design Review Team for the Byron Generating Station, reviewing the Sargent & Lundy design, under contract to Commonwealth Edison.

Previously, Mr. Vandra was a Pipe Support Staff Engineer and Group Leader on the Shimane Unit 2 project. He was involved in independent design reviews and reviewing engineering design problems on the Hope Creek, Limerick and Diablo Canyon projects.

Prior to this, Mr. Vandra was a Senior Engineer and Designated Group Supervisor on the Limerick project, at the jobsite, responsible for reviewing and approving small pipe design and drawings.

Earlier, as Group Leader on the Hitachi Project, Mr. Vandra supervised a group of engineers to meet project schedule and design requirements; coordinated pipe support work with the client, PECL engineers, and the stress group; and reviewed and approved all calculations and drawings.

As a Senior Engineer on Susquehanna, he was responsible for the design, review, modification and issue of all field-changed supports.

Previously, as a Consultant for Dynatech Nuclear and Code III Associates, Mr. Vandra worked on Susquehanna and Diablo Canyon projects, designing, analyzing, checking and reviewing pipe supports, and on Hope Creek, he was responsible for cable tray and conduit supports.

Prior to that, for six years, Mr. Vandra was a Senior Engineer and Group Supervisor on a breeder project for Burns and Roe, Inc. His responsibilities included the design, layout, cost estimating, scheduling, quality assurance of the structural design of the reactor building and equipment supports.

GIRDHAR VANDRA (Continued)

EXPERIENCE
(Continued)

Earlier, Mr. Vandra was a Senior Engineer on the Shearon Harris Project for Ebasco Services, Inc., where he was responsible for the design and analysis of the internal containment structure and equipment supports.

For American Electric Power, Inc., Mr. Vandra checked the design of equipment supports and structural elements on the Cook Nuclear Power Project; for Stone and Webster Engineering Corp., he was a junior engineer working on the design of turbine support and the intake structure for Long Island Lighting Co.; and for Severud Associates, Mr. Vandra was a junior engineer in building design.

September 1984