

EBASCO SERVICES INCORPORATED**EBASCO**

Two World Trade Center, New York, N.Y. 10048

50-358

January 13, 1984

PRINCIPAL STAFF			
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D/RA		DE	
A/RA		DRMSP	
RC		DRMA	
FAO		SCS	✓
SGA		ML	
ENF		File	has

page 3

U. S. Nuclear Regulatory Commission
 Region III
 799 Roosevelt Road
 Glen Ellyn, IL 60137

Attention: J G Keppler

Gentlemen:

Subject: Cincinnati Gas and Electric Company
 Zimmer Nuclear Power Station Unit No. 1
 Docket No. 50-358
 Independent Auditor for Plan to Verify Construction (PVQC)

In accordance with your request at the January 11, 1984 public hearing with respect to the Zimmer project, we are transmitting herewith resumes for those principal positions noted on the organization chart in Section IV of the Ebasco December 5, 1983 proposal to the Cincinnati Gas and Electric Company. With respect to the Quality Records Supervisor, we are submitting the names of two individuals at this time for your review.

POSITIONPROPOSED PERSONNEL

Manager Quality Assurance Site Services	L A Stinson
Quality Program Site Manager	L Borchardt
Quality Assurance Engineering Supervisor	S Missailidis
Quality Assurance/Quality Control Site Supervisor	L A Bast
Quality Records Supervisor	V M Burgard & J Purdy
Project Quality Assurance Engineer	P Panchal
Lead Training and Certification Specialist	A Contino
Lead Program Audits and Trend Analysis Specialist	J Gutierrez
Lead Civil Auditor	M Diaz
Lead HVAC Auditor	M Mulder
Lead Piping and Welding Auditor	G McMan
Lead Mechanical Auditor	E Fahey
Lead Electrical and I&C Auditor	R Mehnert
Lead Nondestructive Examination Auditor	W K Drinkard

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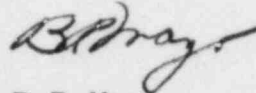
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U. S. Nuclear Regulatory Commission
January 13, 1984
Page Two

With respect to the Senior Consulting Engineer and the Non-destructive Examination Supervisor listed under the Quality Assurance Engineering Supervisor position, we are including the resumes of S Sparacino as the Senior Consulting Engineer and R DeTommaso as the Nondestructive Examination Level III Examiner. These two individuals will be retained on the Ebasco Home Office staff and will be permanently available to assist the Zimmer independent audit team at the site.

We feel that the individuals proposed for assignment to this project are well qualified and have the necessary experience to perform their required functions under our scope of work as the Independent Auditor. Should you have any questions regarding this submittal or require any other information, please do not hesitate to contact me.

Very truly yours,



B R Mazo
Director Quality Assurance

BRM/cu
Enclosures

cc: NRC Office of Inspection and Enforcement
Washington, DC 20555 - J Taylor

NRC Resident Site Supervisor
W M Hill

NRC Zimmer Project Inspector, Region III
E R Schweibinz

NRC Office of Nuclear Reactor Regulation
D G Eisenhut, L L Kintner

NRC Office of Executive Legal Director
J Lieberman

G F Cole - Cincinnati Gas and Electric Company

Larry Alliton Stinson

B.S.E., Science Engineering - University of
Michigan - 1963

S.S.E., Engineering Mathematics - University of
Michigan - 1963

Quality Program Site Manager - Ebasco (1978-Present)

Responsible for implementation of the company's Quality Assurance Program at the nuclear construction site. Included in this scope are Quality Assurance; Quality Assurance Records; Quality Control activities. Manages a staff of over 150 engineers and specialists. Responsible for reviewing and approving quality programs and procedures of all site contractors involved in installation of safety-related material and equipment. Responsible for monitoring quality program implementation for compliance with 10CFR50 Appendix B, ANSI N45.2 and the ASME Boiler and Pressure Vessel Code and initiating action to revise these programs as necessary.

Project Manager - Potomac Electric Power Company (1972-1978)

Responsible for managing the project; for monitoring and controlling project related activities of organizations outside PEPCO and other groups within PEPCO which contributed to the project. Established and approved cost, schedule and technical goals and the measured performance toward those goals. Responsible for establishing the necessary systems to allow early identification of problems and implementation of corrective action.

Assistant Director - U.S. Atomic Energy Commission - Division of Naval Reactors (1970-1972)

Responsible for overall coordination of joint AEC-Navy Nuclear Propulsion Program at Charleston Naval Shipyard, Charleston, South Carolina. Review and analyze planning and performance for all aspects of nuclear reactor plant overhaul, refueling, testing and operation to ensure safety, technical compliance, scheduler adherence and minimal cost.

Supervisor - U.S. Atomic Energy Commission - Submarine Reactor Service Branch NAVSHIPS (08) (1968-1970)

Responsible for refueling and reactor maintenance for all Naval nuclear submarines and their prototypes (11 designs with approximately 110 nuclear reactor plants.) Established basic design parameters for reactor servicing systems and resolved conflicts between these design objectives and reactor plant and ship design. Defined the requirements for testing the servicing system prior to use and initiated action to correct equipment design or procedure deficiencies.

Engineer - U.S. Atomic Energy Commission - Submarine Reactor Service Branch NAVSHIPS (08) (1963-1968)

Responsible for reactor servicing system design, procedures, and reactor servicing of 5 design projects including approximately 100 nuclear reactors. Responsible for design, procurement and use of irradiated nuclear fuel shipping containers.

Project Manager

EXPERIENCE SUMMARY

Total experience is 33 years on utility projects covering engineering, construction and project management of fossil fuel and nuclear generating stations. Served in a number of positions with increasing responsibility.

Major assignments and responsibilities included:

o Project Manager: (1971-Present)

Responsible for overall direction and monitoring of nuclear and fossil fuel fired project activities in accordance with schedule, budget and scope of work.

Liaison with client on project matters.

Administration of contracts.

Development of budgets and schedules.

Development of reports and controls to monitor actual progress and expenditure against scheduled progress and budget.

Direct preparation and flow of project documents, monitoring cash requirements and cash flow.

Responsible for developing one of the Ebasco "Coal Teams", in defining engineering, designing and scheduling a coal-fired reference power station.

o Supervising Mechanical Engineer: (1967-1971)

Technical and administrative responsibility for all assigned projects including completion of work on schedule and within budget.

Training, evaluating and hiring of mechanical engineers within the assigned project groups.

Member of Company's Quality Assurance Committee. This committee set standards and guidelines of quality assurance for engineering of both nuclear and fossil fuel-fired power plants.

o Project Engineer: (1963-1967)

Complete project responsibility and administration of engineering including plant layout of major and auxiliary equipment through both project design and construction.

Supervision and review in the preparation of specifications, bid analysis and purchase of equipment.

PROJECT ENGINEER (Cont'd)

Coordinating work within engineering disciplines.

Corresponding and meeting with vendor's and Client's engineers to resolve engineering problems and presenting recommendations.

Maintaining progress of plant design on schedule and within cost estimates.

o Resident Engineer: (1961-1963)

Responsible for all site engineering and for all materials and equipment during erection of first nuclear power reactor in Japan (Japan Atomic Energy Research Institute - JPDR 12.5 MW). During this period, also supervised the erection and testing of the reactor enclosure.

o Mechanical Design Engineer: (1957-1961)

Mechanical Design Engineer for coal, oil and gas fired generating stations.

Responsible for writing equipment specifications; preparation of engineering and cost evaluation data for equipment to be purchased; flow diagrams; corresponding and meeting with vendor's and Client's engineers to resolve various engineering problems which arise during the design status of power generating stations.

c Supervising Construction Engineer: (1950-1957)

Responsible for planning, directing and supervising all mechanical phases of coal-fired power plant construction. Responsible for the department consisting of mechanical engineers, welding technicians and instrumentation engineers. About 10 contractors and subcontractors were directly responsible to the Mechanical Section. Responsibilities involved scheduling of work, liaison between contractors and coordination of plant operating department and design section. During this period, supervised erection of the first supercritical steam generating station in the United States utilizing steam at 4500 psi and 1150 F at the turbine throttle.

REPRESENTATIVE EXPERIENCE

Client	Project	Fuel
Japan Atomic Power Company	Tsuruga Unit No. 1-350MWe	Nuclear
Tokyo Electric Power Company	Fukushima Unit No. 1-460MWe	Nuclear
Tokyo Electric Power Company	Fukushima Unit No. 2-780MWe	Nuclear
Tokyo Electric Power Company	Kashima Units 5&6 each 1000MWe	Oil
Furnas Centrais Electricas S.A.	Angra Unit No. 1-625MWe	Nuclear

Ludwig Borchardt

PROJECT ENGINEER

REPRESENTATIVE EXPERIENCE (Cont'd)

Client	Project	Fuel
Pennsylvania Power & Light Company	Brunner Island No. 1-330MWe	Coal
Carolina Power & Light Company	HB Robinson No. 1-180MWe	Coal & Gas
Arkansas Power & Light Company	Lake Catherine No. 4-530 MW	Oil
Long Island Lighting Company	Northport Units 1,2 and 3 - 380MWe each	Oil
Power Authority State of New York	Astoria Unit No. 6-825MWe	Gas
Consumers Power Company	Ludington Pumped Storage 6-300 MWe each	Hydro
Florida Power & Light Company	St. Lucie Unit No. 1-890 MWe	Nuclear
Washington Public Power Supply System	Satsop Units 3&5-1250 MWe each	Nuclear
British Columbia Hydro & Pwr Auth	Hat Creek - 4 x 500MWe	Coal

Seven years experience in Construction with American Electric Power Company.

EMPLOYMENT HISTORY

Ebasco Services Incorporated	1957 - Present
American Electric Power Company	1950 - 1957

Supervising Construction Engineer

EDUCATION

City College of New York - B.M.E.

City College of New York - M.M.E.

PROFESSIONAL AFFILIATIONS

Registered Professional Engineer in the States of New York, Ohio, West Virginia, North Carolina, Florida and California.
Member - American Society of Mechanical Engineers (ASME)
Member - Society of Professional Engineers
Former Member - ANSIB31.1.0 Power Piping Code Committee

STEPHEN MISSAILIDIS

Quality Assurance Engineering Supervisor

EXPERIENCE SUMMARY

Principal Engineer with over eight years experience in Quality Assurance Engineering, and over two years experience in nuclear licensing. Responsibilities included directing the execution of all project Quality Assurance activities including preparation, revision, distribution and control of the Project Quality Assurance Program Manual; review of Ebasco specifications, drawings, supplier specifications and procedures. Responsible for development of Quality Plans for use by Ebasco Vendor Quality Assurance Representatives, including review and disposition of nonconformances. Review and evaluation of supplier Quality Assurance Programs Fabrication and Test Procedures. Responsible for review and interpretation of applicable industry codes and Nuclear Regulatory Commission Quality Assurance criteria.

Licensing responsibilities included coordination, preparation and defense of Safety Analysis Report, amendments thereto, and other licensing documents, as well as technical review and assistance in interpretation and implementation of Nuclear Regulatory Commission criteria for Ebasco clients.

REPRESENTATIVE EXPERIENCE

Client	Project	Size	Fuel
Taiwan Power Company	Chin Shan Units	600 MW ea.	Nuclear
Louisiana Power & Light Company	Waterford Unit No. 3	1165 MW ea.	Nuclear
Comision Federal De Electricidad, Mexico	Laguna Verde Unit Nos. 1 & 2	650 MW ea.	Nuclear
Carolina Power & Light Company	Shearon Harris Unit Nos. 1-4	900 MW ea.	Nuclear
Florida Power & Light Company	St. Lucie Unit Nos. 1 & 2	890 MW ea.	Nuclear

EMPLOYMENT HISTORY

Ebasco Services Incorporated, New York, NY; 1972 - Present

- o Principal Engineer, 1978 - Present
- o Senior Engineer, 1976 - 1978
- o Engineer, 1972 - 1976

General Electric Company; 1967 - 1972

- o Engineer

STEPHEN MISSAILIDIS

EMPLOYMENT HISTORY (Cont'd)

United States Navy; 1957 - 1972

o Line Officer

EDUCATION

U.S. Naval Academy - B.S. Engineering - 1957

Adelphi University - MBA - 1976

LARRY A BAST

Quality Assurance/Quality Control Site Supervisor

EXPERIENCE SUMMARY

Physical Metallurgist with over sixteen years experience in quality assurance, quality control and manufacturing industries. This experience includes materials fabrication, reactor manufacture, core component procurement and nuclear power plant construction. Responsibilities have included development and implementation of quality assurance programs, specification and procedure generation and supervision of Site Quality Assurance Engineering.

Administrative responsibilities have involved site incorporation of corporate QA programs, policies and procedures, establishment and maintenance of trending analysis systems, and providing interfaces for regulatory and client organizations.

REPRESENTATIVE EXPERIENCE

Client	Project	Size	Fuel	Position
Washington Public Power Supply System	WNP-3/5	1300MW ea.	Nuclear	QA/QC Site Supervisor

EMPLOYMENT HISTORY

Ebasco Services Incorporated, New York, NY: 1979 - Present

- o Site QA Supervisor, 1982 - Present
- o Principal Engineer Quality Assurance, 1981 - 1982
- o Senior Quality Assurance Engineer, 1979 - 1981

Westinghouse Hanford Company, Richland, Wash.: 1975 - 1979

- o Advanced Engineer, 1975 - 1979

Byron Jackson Pump, Breeder Reactor Pump Dpt., Vernon, Calif.: 1974 - 1975

- o Senior Quality Assurance Engineer, 1974 - 1975

Babcock and Wilcox Company, Naval Nuclear Fuel Division, Lynchburg, Va.: 1971 - 1974

- o Lead Engineer, Materials Management, 1973 - 1974
- o Quality Control Engineer, Specialty Inspection, 1972 - 1973
- o Quality Assurance Engineer, 1971 - 1972

Teledyne Wah Chang Albany Corp., Albany, Oregon: 1969 - 1971

- o Quality Assurance Engineer, 1969 - 1971

Boeing Company Commercial Airplane Division, Renton, Wash.: 1967 - 1969

- o Associate Engineer

LARRY A BAST

EDUCATION

Washington State University - BSP Met. 1967
Oregon State University - MBA Prerequisites 1969 - 1970
Lynn-Benton Community College - Economics, NDT - 1970
Lynchburg College - MBA classes - 1971 - 1973
City University (Bellevue, Wash) - MBA classes - 1983 -

REGISTRATIONS

AWS-QC-1

PROFESSIONAL AFFILIATIONS

None

TECHNICAL PAPERS

None

V. M. (PEGGY) BURGARD

Quality Assurance Records Supervisor

EXPERIENCE SUMMARY

Over six years' experience in Quality Assurance Records Management for a major nuclear-fueled electric generating station. Responsibilities included development and implementation of the system and procedures for review, problem identification and problem resolution of manufacturers' and contractors' installation documentation for nuclear safety-related equipment and material; indexing, filing and retrieval system for all manufacturing and installation documentation for the nuclear plant; establishment of the system to interface with the client's records management system; and review of manufacturers' documentation.

Administrative responsibilities included supervision of up to 150 people involved in quality records review, records vault functions and implementing for the client, the client's computer-based records microfilming system.

Responsible for managing for the client, the client's start-up document control program.

Responsible for the consolidation of the client's Startup Document Control Department and Ebasco Document Control Department and the management of the consolidated department after reorganization occurred.

Assisted the client in supervision, procedure production and procedure review of their permanent plant records system. Evaluated the in-place system relative to the permanent records system to be developed in support of an operating plant.

REPRESENTATIVE EXPERIENCE

Client	Project	Size	Fuel	Position
Louisiana Power & Light Company	Waterford Unit No. 3	1165MW	Nuclear	Supervisor

EMPLOYMENT HISTORY

Ebasco Services Incorporated, New York, NY: 1976 - Present

- o QA Records Supervisor, 1978 - Present
- o QA Records Representative, 1977 - 1978
- o QA Records Coordinator, 1976 - 1977

Crum & Foster Insurance Companies

- o Claims Adjuster, 1970 - 1975

EDUCATION

University of Southwestern Louisiana - BS (Economics) 1969

ALTERNATE
QUALITY RECORDS SUPERVISOR

JACK PURDY

SENIOR QUALITY ASSURANCE SPECIALIST
(QA Records)

EXPERIENCE SUMMARY

Twelve years of Quality Experience, of this, eight years was in Nuclear Power Plant Construction. Knowledgeable of QA requirements during the Design, Procurement, Construction and Start-up/Turnover phases in all disciplines - Civil, Mechanical and Electrical/Instrumentation. Particularly effective in the planning and programmatic development and maintenance of QA construction programs and has had several years of mid-management experience at the site level.

Responsibilities included development and implementation of record management systems with applicable procedures for the review of manufacturing and contractors installation documentation for nuclear related equipment and materials; indexing, filing and retrieval systems for all the applicable manufacturing and installation documentation for nuclear power plants.

Administrative responsibilities include supervision of up to 35 people involved in quality records review, storage and implementation of computer based records microfilming systems.

REPRESENTATIVE EXPERIENCE

Client	Project	Size	Fuel	Position
WPPSS	Nuclear Power Plant(PWR) (Satsop Units 3/5)	1250MW ea	Nuclear	QA Records Lead
WPPSS	Nuclear Power Plant(BWR) (Hanford Unit 2)	1150MW	Nuclear	QA Supervisor
Houston Light	Nuclear Power Plant (South Texas Project Units 1&2)	1250MW ea	Nuclear	QA Systems Manager
Alabama Power Co.	Fossil Power Plant (Miller)	1250MW ea	Coal	QC Inspector E/I Level II
Carolina Power & Light Co.	Nuclear Power Plant (Brunswick Units 1&2)	850MW ea		QC Inspector E/I Level II
NASA	Aerospace (USNS Vanguard TAG-M-19 Tracking Station)	N/A	N/A	Document Coordinator

EMPLOYMENT HISTORY

Ebasco Services Incorporated, New York, New York; September 1982 to Present
Quality Assurance Records Lead

Pittsburgh-Des Moines Corporation, Sacramento, California; April 1981 to August 1982
Quality Assurance Supervisor

Brown & Root, Incorporated, Houston, Texas; April 1977 to April 1981
Quality Assurance Systems Manager

EMPLOYMENT HISTORY (con't)

Alabama Power Co., Birmingham, Alabama; July 1976 to April 1977
Electrical/Instrumentation QC Inspector Level II

Brown & Root, Incorporated, Houston, Texas; January 1975 to July 1976
Electrical/Instrumentation QC Inspector Level II

Bendix Field Engineering Corporation, Columbia, Maryland; June 1971 to July 1974
Document Control

EDUCATION

Palmer College of Chiropractic, Davenport, Iowa; 1954-1958

International Correspondence School, Birmingham, Alabama; 1976-1977

Huntingdon High School, Huntingdon, Pennsylvania; 1950-1954

RICHARD MEHNERT
SENIOR QUALITY ASSURANCE ENGINEER

Experience Summary

Registered Professional Engineer with over eighteen (18) years experience in quality related activities for hydrogen and nuclear fueled electric generating stations and aerospace technology.

Responsible for direction and coordination of on-site electrical quality assurance engineering activities.

Quality Assurance Electrical Engineering, inspection and auditing functions in order to obtain a satisfactory quality level as defined in the applicable code, FSAR, drawings, specifications and established procedures.

Representative Experience

<u>Client</u>	<u>Project</u>	<u>Size</u>	<u>Fuel</u>	<u>Position</u>
Texas Utilities	Commanche Peak	(2)1150 MWe	Nuclear	Lead
Princeton Plasma Physics Lab	TFTR (Tokamak) Project		D ₂	Peon
Washington Public Power Supply System	WPSS 3 & 5	(2)1150 MWe	Nuclear	Support
Houston Lighting & Power	South Texas 1 & 2	(2)1150 MWe	Nuclear	Lead
NAGRA, Swiss Cosertium	High Level Waste Disposal RISK Analysis Study	N/A	Nuclear	Lead
Austrian Gout	Backfit Study & Shielding	2 400 MWe	Nuclear	Support
AEOI	Environmental Study Iran 1 & 2	(2)1280 MWe	Nuclear	Lead
AEOI Atomic Energy Organ. of Iran	Site Selection Study, (Azerbaijan Reg. I)	(2)1100 MWe	Nuclear	Editor 7 Volume Report
Public Service of OK	Blackfox 1 & 2	(2)1220 MWe	Nuclear	Support
USERDA/AEC	Various	Various	Nuclear	Lead

Employment History

Ebasco Services, Incorporated, New York, NY - 3/79 to Present
Senior Quality Assurance Engineer

Brown & Root, Houston, TX - 3/78 to 3/79
Site QA Surveillance Supervisor
QC Staff

Motor-Columbus Engineers, Inc.
Nuclear Engineer

Black & Veatch International
Resident Engineer - Iran
Control Engineer
QA Engineer (Lead Nuclear Auditor)

Education/Registrations

Bachelor of Science, Lehigh University

Master of Science (Electrical Engineer), University of Missouri, Columbia, Mo.

Registered Professional Engineer - Washington, New Jersey, Pennsylvania, Kansas,
California

Completed numerous technical and managerial courses including Fallout Analyst.

Professional Affiliations

American Nuclear Society
American Society for Nondestructive Testing
American Chemical Society
National Society of Professional Engineers

GARLAND MAHAN
Project Quality Assurance Engineer

Experience Summary

Welding and Quality Assurance Engineer with 16 years experience in heavy steel fabrication and quality related activities associated with the Nuclear Power Industry.

Responsible for the application and implementation of the Project Quality Assurance Manual with emphasis directed at the disposition of non-conformance reports (NCRs), discrepancy notices (DNs), condition identification work authorizations (CIWAs) and the review of sub-contractor's procedures.

Representative Experience

<u>Project</u>	<u>Location</u>	<u>Position</u>
Waterford III	Taft, La.	Quality Assurance Engineer
Riverbend	St. Francisville, La.	Senior Welding Engineer
Quad Cities I & II	Cordova, Illinois	Senior Welding Engineer
Pilgram	Plymouth, Mass.	Senior Welding Engineer
Dresden II & III	Seneca, Illinois	Welding & Q. A. Engineer
Calloway	Fulton, Mo.	Welding & Q. A. Engineer
Hutchinson Island	St. Lucie, Fla.	Inspection & Testing Engineer
WPPSS II	Richland, Wash.	Inspection & Testing Engineer

Employment History

Ebasco Services Incorporated, New York, N. Y. 1/83 - Present
Project Quality Assurance Engineer (Waterford III) - 1/83 - Present

Graver Energy Systems Incorporated, E. Chicago, Ind. - 1/80 - 1/83
Senior Welding Engineer - 1/80 - 1/83

Chicago Bridge & Iron Company, Oak Brook, Illinois - 8/66 - 1/80
Welding & Quality Assurance Engineer - 8/74 - 1/80
Welding Engineer Training - 4/74 - 8/74
Inspection and Testing Engineer - 8/66 - 4/74

Education/Certifications

Bachelor of Science in Welding Engineering - 1966
Certified Level III in Quality Control by ASNT - 1979

Professional Affiliations

American Welding Society - AWS
American Society for Nondestructive Testing - ASNT

JOE GUTIERREZ

Site Quality Assurance Supervisor

EXPERIENCE SUMMARY

Civil Engineer with over seven years' experience in implementation of QA/QC programs in the nuclear power plant construction industry. Currently assigned as Supervisor of a department with a staff of engineers, technicians, and specialists engaged in the administration, coordination and evaluation of the overall progress of all project site engineering, procurement, construction and contractor QA/QC activities, including, but not limited to field layout, field design, interpretation of designs and specifications, and furnishing of general technical assistance and advice to site personnel as required. Department duties include development, review, and approval of instructions and procedures related to all aspects of construction, inspection, test methods, equipment maintenance, plant startup operations, and administrative engineering and design systems. Review and approve purchase orders including development of inspection sampling plans. Establish manufacturer and supplier documentation requirements. Conduct detailed troubleshooting surveys and examinations of the plant structures, systems, tests, equipment and maintenance activities to ensure satisfactory performance. Evaluate and approve contractor, manufacturer, and supplier qualifications capabilities and QA programs for the execution of contracts. Develop and coordinate the project system for the collection, review, storage, and maintenance of Quality Assurance Records, including turnover of records to the client. Perform and coordinate reviews, evaluations, and investigations of significant design deficiencies, construction problems, material defects, test failures, and overall program system deficiencies, including preparation and issuance of reports. Communicate and provide liaison with client, contractors, suppliers, regulatory agencies, home office, and intra-organization department personnel.

Exercise normal supervisory responsibility with respect to subordinates, including work assignment, training and development, appraisal, employment and discharge, discipline and changes in employee status.

Two years' related experience in the construction and design of federal highway interstate systems, including material testing, inspection, field surveys and layout, construction and placement of pavements, bridge construction, culvert sizing, high water and drainage calculations, preparation of maps and drawings, computation of material quantities.

Actively engaged in code and standard writing and development activities as member of ACI Committee 121, "Quality Assurance Systems for Concrete," from 1978 to present. Member of the Working Group on Concrete of ACI-ASME Committee 359, "Concrete Components for Nuclear Reactors," 1976 to present.

REPRESENTATIVE EXPERIENCE

* Client	Project	Size	Fuel	Position
Louisiana Power & Light Company	Waterford SES Unit No. 3	1165 MW PWR	Nuclear	Lead

JOE GUTIERREZ

REPRESENTATIVE EXPERIENCE (Cont'd)

Client	Project	Size	Fuel	Position
Mississippi Power & Light Company	Grand Gulf Unit Nos. 1 & 2	1250 BWR	Nuclear	Support
Illinois Dept. of Transportation	Concrete Hydraulics Design Section at the Ottawa District Office	--	--	Support/ Lead
Allied-Gulf Nuclear Services	Barnwell Nuclear Fuel Plant	--	Nuclear	Support
New Mexico State Highway Dept.	Interstate I-10 & I-25	--	--	Lead/ Support

EMPLOYMENT HISTORY

Ebasco Services, Inc., New York, NY; 1975-Present

- o Site Quality Assurance Supervisor, 8/81-Present
- o Principal Quality Assurance Engineer, 1980-1981
- o Senior Quality Assurance Engineer, 1978-1980
- o Quality Assurance Engineer, 1975-1978

Bechtel Power Corporation, Gaithersburg, Maryland; 5/1975 - 9/1975

- o Civil Quality Control Engineer

Illinois Department of Transportation, Ottawa, Illinois; 4/1975 - 5/1975

- o Assistant Project Engineer

Daniels Construction Company, Greenville, South Carolina; 1972-1975

- o Civil Quality Control Engineer

New Mexico State Highway Dept., Santa Fe, New Mexico; 1970-1972

- o Construction Aide II

JOE GUTIERREZ

EDUCATION

Bachelor of Science in Civil Engineering, 1974, New Mexico State University
Associate of Science in Engineering Technology, 1969, New Mexico State University
Certificate in Drafting, 1967, New Mexico State University
National Academy of Code Administration - Certificate of Attainment in Management

REGISTRATIONS

Engineer-In-Training-New Mexico

PROFESSIONAL AFFILIATIONS

National Academy of Code Administration - Louisiana State Membership Chairman.
Member of Working Group on ACI-ASME Committee 359, Concrete Components for Nuclear Reactors, 1976 to date.
Member of ACI Committee 121 - Quality Assurance Systems for Concrete, 1978 to date.
Member - National Society of Professional Engineers.
Member - American Society of Civil Engineers.
Member - American Institute of Steel Construction.
Member - American Concrete Institute.

WILLIAM K DRINKARD
PROJECT QUALITY ENGINEER
(SENIOR QUALITY ASSURANCE SPECIALIST)

EXPERIENCE SUMMARY

Senior Quality Assurance Specialist with twenty-one years experience in nondestructive examination and three and one half years Health Physics experience. Responsibilities have included the setting up of a new radiographic operation, including the hiring, training and qualification of radiographic inspectors, layout and procurement of equipment, developing procedures and establishing techniques, developing Radiation Safety Programs, reviewing subcontractors' and vendors' NDE programs and inspections, conducting audits and certifying work packages.

Administrative responsibilities included developing manloading schedules, training programs, and the supervision of twenty-four Radiographers.

Currently as a Level III, radiography, responsible for providing assurance that contractors' NDE programs and activities are in accordance with applicable codes and specifications. Also, as Lead Auditor, responsible for auditing contractors' activities.

As QA coatings contract engineer, review Site-generated contracts, evaluate bids and review and comment on contractors' QA programs and procedures.

REPRESENTATIVE EXPERIENCE

Client	Project	Size	Fuel	Position
Washington Public Power	WPPSS Unit Nos. 3 & 5	1300 MW ea.	Nuclear	Lead
Naval Reactors	S8G Prototype	Classified	Nuclear	Lead

EMPLOYMENT HISTORY

Ebasco Services Incorporated, New York, NY: 1980 - Present

Senior Quality Assurance Specialist

Electric Boat Division, General Dynamics, Groton, Conn: 1959 - 1980

- . NDE Examiner - General Foreman, 1973 - 1980
- . Radiographer - Working Leader, 1963 - 1973
- . Radiographer, 1962 - 1963
- . Health Physics Monitor, 1959 - 1962

WILLIAM K DRINKARD
PROJECT QUALITY ENGINEER

- 2 -

EDUCATION

AS - University - State of New York - 1980

REGISTRATIONS

NDT Level III - American Society for Nondestructive Testing

PRAVIN G. PANCHAL

Principal QA Engineer

EXPERIENCE SUMMARY

Principal QA Engineer with over twelve years experience in QA engineering and electrical design and engineering of fossil and nuclear-fueled electric generating stations. Responsibilities included planning, coordinating and overseeing the implementation of the Quality Assurance Program for WPPSS Unit Nos. 3 & 5 nuclear projects; coordinating the engineering and design personnel assigned to the project; identifying quality related problems, overseeing the resolution and disposition of nonconformance. Duties include input to the PSAR, reviewing specifications and drawings for inclusion of QA requirements, evaluating the QA program of suppliers, QA facility surveys and audits of suppliers, preparing QA plans for surveillance in suppliers' shops, reviewing suppliers' fabrication and test procedures, preparing QA engineering procedures, conducting site audits (in accordance with the Quality Program and Site Quality Assurance), representing Quality Assurance Engineering and all project-related activities (Owner, NSSS, management meetings, NRC, etc.), controlling the QA manuals for the project.

Responsible for planning, scheduling and conducting Quality Assurance audits in various engineering and design disciplines in the capacity of Lead Auditor. Also involved in client, Nuclear Regulatory Commission (NRC) and site engineering audits.

Responsible for review of electrical system design in reactor, fuel handling, diesel generator and turbine building, for Fukushima Nuclear Power Plant Unit No. 6 (BWR) in the capacity of Lead Electrical Designer.

Responsible for preparing and checking electrical system desing in diesel generator, intake structure and turbine building for the fossil power plants.

REPRESENTATIVE EXPERIENCE

Client	Project	Fuel	Position
Houston Lighting & Power Company	Greens Bayou No. 5	Fossil	Senior Designer
Tokyo Electric Power Company	Fukushima No. 6	Nuclear	Lead Designer
Florida Power & Light Company	St. Lucie No. 2	Nuclear	QA Engineer
Louisiana Power & Light Company	Waterford No. 3	Nuclear	QA Engineer
Houston Lighting & Power Company	Allens Creek No. 1	Nuclear	QA Engineer
Comision Federal De Electricidad	Laguna Verde Nos. 1 & 2	Nuclear	QA Engineer

PRAVIN G. PANCHAL

REPRESENTATIVE EXPERIENCE (Cont'd)

Client	Project	Fuel	Position
Carolina Power & Light Company	Shearon Harris Nos. 1-4	Nuclear	QA Engineer
Washington Public Power Supply System	WPPSS Nos. 3 & 5	Nuclear	SR & PR QA Engineer

EMPLOYMENT HISTORY

Ebasco Services Incorporated, New York, NY; 1970-Present

- o Principal Engineer, 1981 - Present
- o Senior Engineer, 1978-1981
- o Engineer, 1976-1978
- o Senior Designer, 1973-1976
- o Designer, 1970-1973

Joseph R. Loring and Associates; 1969-1970

- o Electrical Designer

EDUCATION

Polytechnic Institute-MS, Nuclear Engineering - 1976
M S University of Baroda-BS, Electrical Engineering - 1966 (India)

PROFESSIONAL AFFILIATIONS

ANS-Member
ASQC-Member

MARIO R. DIAZ

Principal Civil QA Engineer

EXPERIENCE SUMMARY

Civil Engineer with over eighteen years of diversified experience in all areas of civil engineering, construction and craftsmen supervision, especially during the construction of hydro, coal and nuclear fueled electric generating stations. Performed Construction Superintendent, QA Engineer and QA Lead Auditor functions.

Responsibilities included technical and direct supervision of design/construction engineers and craftsmen; maintained liaison with design engineering and field activities; reviewed interpretation of civil design documents and prepared field engineering documents to ensure compliance to all applicable codes, standards and QA/QC requirements; supervision of civil work including excavation (also work perforation with use of explosives), surveying, backfill, forms, steel reinforcement, embedded items, concrete placement and post placement activities; inspected completion of civil work; developed and implemented better construction methods; supervised the performance and use of heavy construction equipment; bid evaluations; supervised installation and testing of HVAC system (containment building) for a nuclear plant in process of major expansion. Experience includes both domestic and overseas work.

Administrative responsibilities included project implementation of QA/QC programs; monitored quantities installed within the scope of budget and maintained construction schedule; coordination of civil work with various construction disciplines; negotiated labor problems and maintained contact with vendors to ensure coordination of work in progress.

Responsible for audit plans defining the scope of audits to be performed; perform and document results of audits and follow-up audits and provide input to reports indicating the status of audit results, follow-up activities and audits performed and scheduled; in accordance with the PSAR requirements (10CFR50, Appendix B, 18 Criteria, ANSI N49.2 and applicable daughter documents, ACI code, ASTM standards, applicable sections of the ASME code, etc.); review and evaluate applicable contractor's and vendor's QA/QC procedures, equipment and construction contract specifications, procedures and applicable design documents to assure the adequacy of the QA/QC requirements; cause activities to be stopped, changed or modified upon determination that such activities do not conform to the requirements of the QA program.

REPRESENTATIVE EXPERIENCE

Client	Project	Fuel-Facility	Position
Government of Chile	Port of Africa	Port Facilities	Civil Engineer
Corporacion De La Vivienda, Chile	Poblacion Lecheros Valparaiso	Apartment Buildings	Assistant Superintendent
Corporacion De La Vivienda, Chile	Villa Olimpica Santiago	Apartment Buildings	Construction Superintendent

MARIO R. DIAZ

REPRESENTATIVE EXPERIENCE (Cont'd)

Client	Project	Size	Fuel	Position
Endesa (Chile)	Central Rapel Unit Nos. 1-5	70 MW ea	Hydro	Superintendent
Salt River Project	Navajo Unit Nos. 1-3	770 MW ea	Coal	Lead
Southern California Edison	San Onofre Unit No. 1	430 MW	Nuclear	Superintendent
Southern California Edison	San Onofre Unit Nos. 2 & 3	1100 MW	Nuclear	Lead
Washington Public Power Supply System	Satsop Unit Nos. 3 & 5	1250 MW	Nuclear	Lead

EMPLOYMENT HISTORY

Ebasco Services Incorporated, New York, N.Y.; 1978 - Present

- o Principal Civil QA Engineer

Bechtel Power Corporation, Los Angeles, CA; 1974-1978

- o Lead Construction Civil Engineer, 1977-1978
- o Construction Superintendent & Civil Assistant Superintendent, 1976-1977
- o Construction Superintendent & Lead Construction Civil Engineer, 1974-1976

Empresa Nacional De Electricidad, Santiago, Chile; 1963-1970

- o Construction Superintendent, 1968-1968
- o Civil Superintendent, 1965-1968
- o Assistant Superintendent, 1963-1965

Modesto Collados S A, Santiago, Chile; 1962-1963

- o Construction Superintendent, 1963-1963
- o Assistant Construction Superintendent, 1962-1963

Ministerio De Obras, Santiago, Chile; 1960-1961

- o Civil Engineer

MARIO R. DIAZ

EDUCATION

Catholic University, Valparaiso, Chile - BSCE - 1962
Catholic University, Valparaiso, Chile - MSCE - 1970
Long Beach City College, California - PT TECH - 1974

REGISTRATIONS

Professional Engineer - Chile

TECHNICAL PAPERS

Professional thesis in the practice and use of explosives during the construction of hydroelectric dams.

EDMUND A FAHEY
Principal Quality Assurance Engineer

EXPERIENCE SUMMARY

Quality Assurance Engineer with over 22 years experience in QA Engineering of fossil and nuclear fueled electric generating stations in all phases of quality engineering.

In addition to Quality Assurance supervisory experience, responsibilities have included the development and implementation of vendor quality assurance programs, pre-award and vendor surveys, sub-contractor quality performance including issuance of periodic progress reports, as well as the development and implementation of sophisticated quality systems encompassing all engineering disciplines.

Have developed and utilized quality programs that have met the requirements of the nuclear power industry; thoroughly familiar with the codes and regulations governing new construction, pre-operational testing, start-up, as well as QA/QC experience at an operating nuclear power station.

REPRESENTATIVE EXPERIENCE

Client	Project	Description	Position
National Power Corp.	Philippine Nuclear Power Plant	New Construction	Advisor
Florida Power and Light	St. Lucie Unit 1 Nuclear Plant	Retro-fit Operating Plant	Advisor
Comision Federal de Electricidad	Laguna Verde Units 1 & 2 Nuclear Plant	New Construction	QA Engineer
Northeast Utilities	Millstone Unit 1 Nuclear Plant	Retro-fit Operating Plant	QA Supervisor
Detroit Edison	FERMI Unit 2 Nuclear Plant	New Construction	QA Supervisor
Southern Services	FARLEY Units 1 & 2 Nuclear Plant	New Construction	QC Supervisor
General Dynamics	Nuclear Submarine Construction	New Construction and Overhaul	Senior QA Engineer

EMPLOYMENT HISTORY

EBASCO Services Incorporated, New York, N Y	1974 - Present
Ralph M Parsons Company, Los Angeles, Ca.	1973 - 1984
Daniel International, Greenville, S.C.	1970 - 1973
General Dynamics, Electric Boat Div., Groton, Conn.	1962 - 1970

EDUCATION

Tri-State College Indiana

BSME

1962

REGISTRATIONS

Professional Engineer

California

PROFESSIONAL AFFILIATIONS

ASQC - Member
ASQC Certified Quality Engineer

Mitchell D Mulder
Site Quality Assurance Lead Auditor

EXPERIENCE SUMMARY

Bachelor of Science Industrial Engineering, with 7 years experience in quality related activities, Marine Engineering and Nuclear fueled power plants.

Provided third party inspection, monitored the manufacturers and installers Quality Assurance Program to verify compliance with ASME III and ANSI B31.1 power piping code requirements. Performed Vendor Surveillance, Internal Audits, and Survey for renewal of (N Stamp), (Na) and (NPT).

Functioned in Supervisory and Quality Control position in all aspects of Marine Engineering.

Boiler water/feedwater chemist, testing and treatment of 600 lbs/and 1200 lbs Boilers. Worked as Boiler Inspector and Authorized Nuclear Inspector commissioned through the National Board of Boiler and Pressure Vessel Inspectors.

REPRESENTATIVE EXPERIENCE

Client	Project	Size	Fuel	Position
United States Navy	Marine	600/ 1200 psi	Diesel	Support & Lead
Wisner & Becker	Enrico Fermi II	1150 MW	Nuclear	Support
J A Jones	WPPSS #1 - Hanford	1250 MW	Nuclear	Support
Niagara Mohawk Power Corp.	Nine Mile Point #1	610 MW	Nuclear	Support
Ebasco Services Inc.	WPPSS #3 - Satsop	1240 MW	Nuclear	Support

EMPLOYMENT HISTORY

Ebasco Services Incorporated - New York, N Y; 7/82 - Present
Senior Associate Engineer, Lead Auditor

National Inspection & Consultants 9/81 - 7/82
Consulting Engineer - Quality Verification

Hartford Steam Boiler Inspection & Insurance 2/80 - 7/81
Authorized Inspector
Authorized Nuclear Inspector

United States Navy 1/75 - 1/80
E-5 (Boiler Technician 2nd Class)
Quality Control Inspector
(Pneamatics) Auto Boiler Control Specialist

Education/Registrations

Bachelor of Science - Industrial Engineering/Registration #82185

Authorized Inspector: ASME Section I

Commissions - Indiana - 9427

Michigan - 603

Ohio -

Pennsylvania - 2954

Authorized Nuclear Inspector - ASME Section III

Commissioned - Ohio, Michigan

Certified Boiler Water/Feedwater Chemist

Professional Affiliations

Member of National Board Boiler & Pressure Vessels Inspectors