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P. O. BOX 1640, JACKSON, MISSISSIPPI 39205

NUCLEAR PRODUCTION DEPARTMENT

May 12, 1982

U.S. Nuclear Regulatory Commission
Office of Nuclear Reactor Regulation
Washington, D.C. 20555

Attention: Mr. Harold R. Denton, Director

Dear Mr. Denton:

SUBJECT: Grand Gulf Nuclear Station
Units 1 and 2
Docket Nos. 50-416 and 50-417
File 0260/L-860.0
Independent Design Verification,
Responses to QAB Questions
AECM-82/188

As you know, a meeting was held with your staff March 11, 1982, for the purpose of introducing the organization (Cygna Energy Services) selected to perform an independent design review at our Grand Gulf Nuclear Station Unit 1 and to allow representatives of Cygna to describe the proposed review. Our letter of March 26, 1982 (AECM-82/114) provides followup documentation of that meeting.

The purpose of this letter is to provide additional information in response to questions recently raised by your Quality Assurance Branch (QAB). Responses to these questions are attached.

The interim report was verbally presented to the staff April 20, 1982, and was concurrently issued, in written form, to MP&L and the NRC on April 29, 1982. The draft report and final report are expected May 21 and June 4, respectively. We look forward to the successful completion of this review. Please do not hesitate to call if you have any questions.

Yours truly,

L. F. Dale
Manager of Nuclear Services

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TMJ/JGC/JDR:lm
Attachments

cc: (See Next Page)

AE2W1

MISSISSIPPI POWER & LIGHT COMPANY

cc: Mr. N. L. Stampley (w/a)
Mr. G. B. Taylor (w/a)
Mr. R. B. McGehee (w/a)
Mr. T. B. Conner (w/a)

Mr. Richard C. DeYoung, Director (w/a)
Office of Inspection & Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Mr. J. P. O'Reilly, Regional Administrator (w/a)
Office of Inspection & Enforcement
U.S. Nuclear Regulatory Commission
Region II
101 Marietta St., N.W., Suite 3100
Atlanta, Georgia 30303

Grand Gulf Nuclear Station
Additional Information Regarding the
Independent Design Review by Cygna Energy Services[1]

1) Scope of the Quality Assurance review:

It is the intent of this review to include all appropriate project commitments relative to design and design control aspects of Quality Assurance (QA) and to concentrate on those Quality Assurance practices which were applied to the areas of concern, i.e., design control activities at Bechtel.

MP&L will insure that the scope of Quality Assurance review will also include MP&L's responsibilities in the QA area, and that the criteria for acceptability of the QA program be based on SAR commitments and revisions to those commitments.

2) Qualifications of personnel to perform the Quality Assurance review:

As discussed in our March 11, 1982, meeting, Attachment 2 to this letter describes the organization of the Cygna team and provides resumes'/qualifications of the QA personnel. This information was provided to MP&L during the proposal phase of this work effort.

3) QA program to be applied to the independent design review effort:

Cygna's review will be performed under the requirements of Sections I (Organization), V (Instructions, Procedures and Drawings), VI (Document Control), X (Inspection), XVI (Corrective Actions), XVII (Quality Assurance Records) and XVIII (Audits) of the Cygna Quality Assurance Manual. This assumes that independent analyses or designs will not be performed during the review process. A brief summary of each of the applicable QA sections is provided below:

- o Organization. The QA department is headed by a Vice President, Quality Assurance, who reports directly to the Chief Operating Officer of Cygna Energy Services. A project QA Engineer has been assigned to this project. He is independent of project personnel and works under a Regional QA Manager.

- o Instructions. Activities affecting quality are guided by the instructions and procedures developed for the project.

- o Document Control. Documents received during the progress of this review effort are processed in accordance with specified procedures.

[1]Informal comments by Quality Assurance Branch (QAB)

- o Surveillance Inspections. Surveillance inspections of project activities are performed in accordance with the Cygna QAM, Section X, "Inspection." These surveillances provide a day-to-day monitoring of project activities by the Project QA Engineers. The purpose of surveillance inspections is to verify project compliance with the requirements of the QAM, and project developed procedures (Work Instructions, Project Manual, etc.). Surveillances are performed using checklists and scheduled on a basis commensurate with the extent of project activities. The system for documentation of surveillance inspections is such to allow for identification of action items (non-conformance to established requirements) with appropriate corrective action performed by responsible personnel. Surveillance reports are distributed to Cygna's highest levels of management.

- o Corrective Actions. Defects and failures to comply are reported to MP&L for evaluation.

- o Quality Assurance Records. Documentation developed during the course of this independent design review will be identifiable and retrievable.

- o Audits. Audits are performed of Cygna's activities to peridically assess, the adequacy and effectiveness of the Cygna QA program. These audits are performed in accordance with Section XVIII of the Cygna QAM and QA departmental procedures. The audits are scheduled in a manner to provide adequate coverage of on-going QA activities such that the overall Cygna QA program is audited on an annual basis.

4) MP&L organizational interface relationships, authorities and responsibilities in determining program acceptability:

The NRC request for performance of an independent design review arose from discussions between the NRC staff and MP&L management, in particular our Vice-President - Nuclear Production and our Manager of Safety & Licensing. Based on these discussions, proposals were obtained and evaluated at a management level including MP&L's Manager of Quality Assurance and Manager of Nuclear Plant Engineering. Pursuant to this review Cygna Energy Services was selected. Our March 11, 1982, meeting with the NRC was held to allow Cygna to describe the program, their qualifications, and their independence relative to stated NRC criteria. Based on our discussions at that meeting, and a generally favorable response by the NRC, our review program was begun immediately.

MP&L interface during the performance of the review is, by design, very minimal. A point of contact has been established with our Manager of Administrative and Business Services to allow for coordinating of onsite visits, etc. This individual also would be contacted in the event that a finding is determined to have definite potential safety impact, who in turn would immediately contact our Manager of Quality Assurance so that our established procedures would govern relative to evaluation of potential safety findings. All interim and final reports are to be submitted concurrently to the NRC.

Project Organization
Independent Design Review of Grand Gulf Nuclear Station

A. Cygna Philosophy

Cygna's philosophy is to manage a project in such a way as to produce quality results on schedule and within budget. Our experience indicates this can be accomplished by a technically sound organization and efficient management.

Cygna has committed highly qualified professionals with extensive experience in the nuclear field to manage the project and to serve as lead engineers. As we perceive this effort to require an intensive concentration in order to support the Grand Gulf licensing effort, we intend to commit our most senior personnel to this work. In addition, since MP&L management will be relying on the results of the independent review as an assessment of the adequacy of the piping design for Grand Gulf, Cygna will convene a Senior Review Team to review all findings from the project team's review. This effort will include a review of findings from either the Quality Assurance or Technical review activities. The Senior Review Team will be comprised of Mr. B. K. Kacyra, Chief Executive Officer (Cygna Corporation), Mr. J. E. Ward, Chief Executive Officer (Cygna Energy Services), and Mr. E. F. Trainor, Vice President (Cygna Energy Services). The composition of this team brings to bear Cygna's depth of experience in the areas of structural/piping analysis, system design and licensing, and quality assurance, respectively.

B. Cygna Project Team Organization

Figure 1 illustrates the organization of Cygna's proposed project team and the interrelationship of the Senior Review Team. We believe the commitment and interest of Cygna's management in meeting the needs of MP&L in this effort is demonstrated by the assignment of some of our most senior personnel to this effort.

Mr. Robert A. Falciani will act as Principal-In-Charge for the performance of this effort. In this capacity he will be prime contact with MP&L management for all aspects of the work. As a Principal of the firm he will ensure that the appropriate resources will be concentrated on this effort and that the utilization of the Senior Review Team is carried out in an effective and efficient manner. In addition, Mr. Falciani has the authority to represent Cygna in all matters, including contractual and commercial.

Mr. Ted T. Wittig will act as Project Manager for this proposed scope of work. He will direct all aspects of the project and will be prime contact with MP&L and Bechtel staff representatives. In this capacity he will be responsible for the day-to-day monitoring

of the progress of the work including performance against established budgets and schedules. Mr. Wittig brings over eleven years of experience with respect to the engineering and analysis of nuclear power projects. In addition, his specific experience in the areas of technical review and licensing will be directly applicable to the work being proposed herein.

Since the primary emphasis of the job will require a concentration in the two principal areas of quality assurance and piping analysis and design technology, Cygna proposes to utilize individuals with extensive experience in each of these areas.

Mr. Paul D. DiDonato will serve as lead quality assurance reviewer for this effort. He will direct and participate in the review of the design control portion of the Bechtel quality assurance program. His eight years of experience in the development, implementation, evaluation and auditing of Quality Assurance Programs uniquely qualifies him for this scope of work. Mr. DiDonato's experience has encompassed all aspects of nuclear quality assurance. He will be assisted by highly qualified quality assurance engineers, as necessary, for this effort.

In order to provide the most effective and efficient piping system review, Cygna proposes to assign Dr. Herman Suryoutomo. He will participate in the technical review of the piping and pipe support designs. His fifteen years of experience in the area of piping analysis and pipe support design will provide the necessary expertiese to ensure a thorough independent review of the selected piping problems. Dr. Suryoutomo's attendant expertise in the area of seismic analysis and design could be brought to bear if, in fact, any questions or concerns arise regarding any related structural analysis (e.g., development of amplified response spectra, structural dynamics, etc.). He will be assisted by highly qualified piping engineers, as necessary, for this effort.

Mr. Dave Doyel will be assigned as responsible engineer for the as-built verification activity. His fifteen years of experience in the areas of power plant operations and maintenance provide the level of proficiency necessary to ensure that any required job site activities will be completed in an effective and efficient manner. He will participate in the development of any required as-built verification procedures and will participate in the execution of the effort.

In addition to the key project team members discussed above, Cygna will access specialty consultants as needed in the areas of codes and standards, electrical, and I&C. These individuals would be utilized in a support capacity for activities which may be required such as technical interpretation of the codes and standards as applied to the Grand Gulf piping design. From time to time certain other support personnel may be utilized in order to ensure the cost efficiency of the effort. Typical resumes of support personnel who would be utilized are provided in Apapendix A.

C. Personnel

Resumes of key personnel, consultants and support personnel for this proposed effort are provided in Appendix A to this proposal.

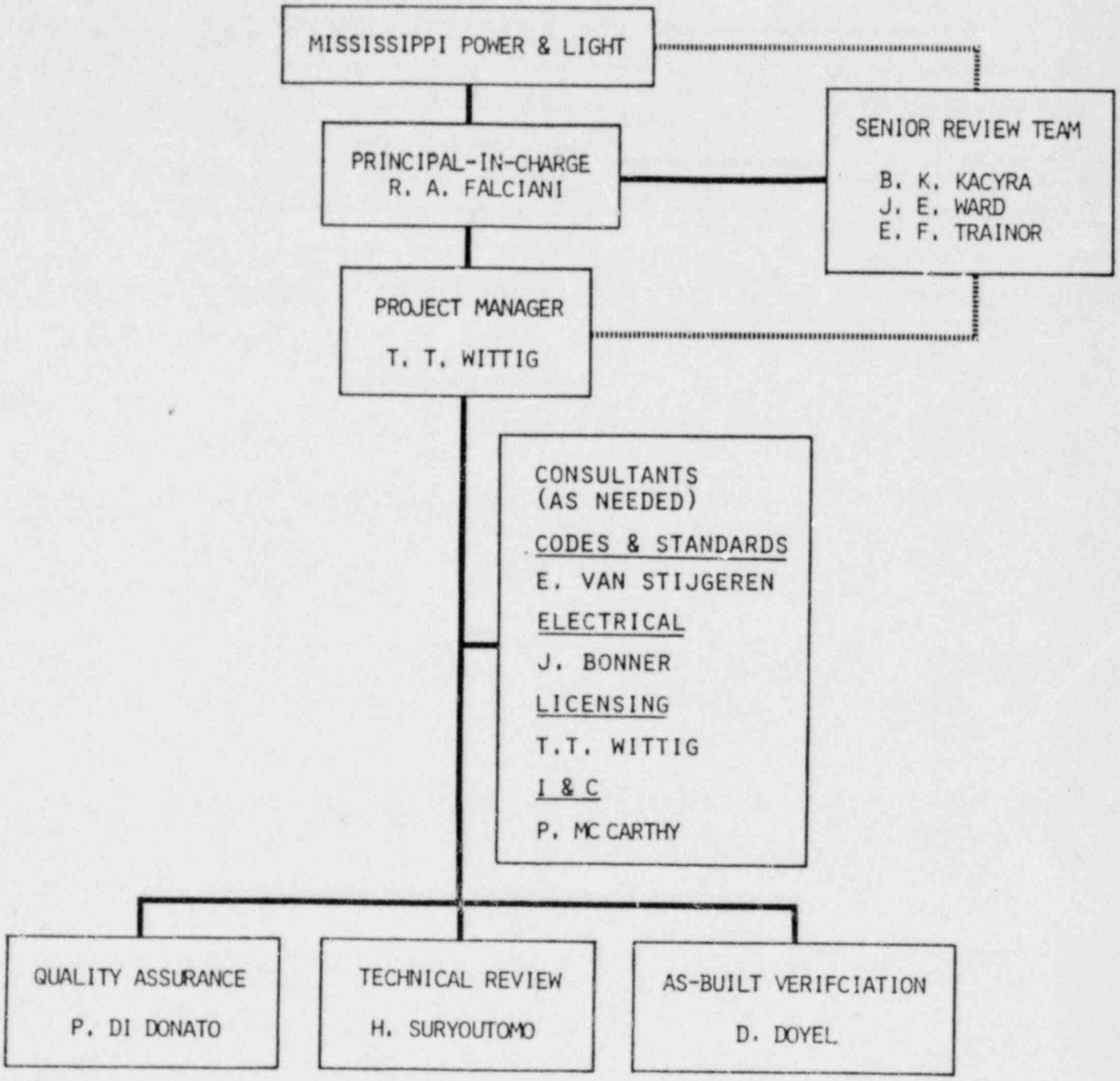

FIGURE 1

Project Organization

APPENDIX A[1]

RESUMES

PART 1	PROJECT PERSONNEL
PART 2	SENIOR REVIEW TEAM
PART 3	TYPICAL SUPPORT PERSONNEL

[1]QA Personnel Only

PART 1[1]

PROJECT PERSONNEL

[1]QA Personnel Only

PAUL D. DIDONATO

EDUCATION:

B.S., Business Administration, Industrial Technology, Northeastern University, Boston, MA
A.S., Civil and Highway Engineering Technology, Wentworth Institute of Technology, Boston, MA

PROFESSIONAL AFFILIATIONS:

Member, American Society for Quality Control

PROFESSIONAL EXPERIENCE:

Mr. DiDonato has over eight years of experience in the nuclear industry. Presently, he is assigned as the Quality Assurance Operations Supervisor, Western Region and is responsible for the implementation of the Cygna Quality ssurance Program for all west coast area offices including San Francisco, Santa Ana, and Richland. Prior to his assignment on the West coast, Mr. DiDonato was assigned as a Project Quality Assurance Engineer in the Cygna Boston area office. He was responsible for the quality assurance implementation of all Boston office based nuclear projects, in addition to interfacing with client QA organizations.

Prior to joining Cygna, Mr. DiDonato was a member of the Quality Assurance Department of a major East coast A/E. His initial responsibilities included the development and presentation of Quality Assurance training programs. He specialized in the requirements of ASME III Division 1, Industry Auditing Standards and Regulatory Guides, as they relate to nuclear power plant construction.

Mr. DiDonato was subsequently promoted to the position of Engineer in the Quality Assurance Auditing Division. In that capacity, he was responsible for the preparation and conduct of headquarters, site and sub-contractor quality assurance audits during pre-construction and construction phases of all active nuclear power plant projects. Mr. DiDonato was subsequently promoted to the positions of Quality Assurance Engineer and Lead Auditor. In the latter capacity, he assumed the responsibilities for audits conducted as a lead auditor in accordance with ANSI N45.2.23.

Mr. DiDonato's additional responsibilities included the coordination of all audit activities performed at the Shoreham Nuclear Power Station, annual trend analysis of quality activities, preparation/revision of audit procedures, and conduct of seminars for the purpose of auditor certification.

PART 2[1]

SENIOR REVIEW TEAM

[1]QA Personnel Only

EUGENE F. TRAINOR

EDUCATION:

M.S., Management, Rensselaer Polytechnical Institute, Troy, NY
B.S., General Engineering, U.S. Coast Guard Academy, New London, CN
Naval Nuclear Reactor Testing and Operations, Mare Island Naval Shipyard, Vallejo, CA
Executive Management, Center for Management Development, Northeastern University, Boston, MA
Production, Planning and Control, Massachusetts Institute of Technology, Cambridge, MA
Government Contract Law, Marshall Wythe School of Law, College of William and Mary, Williamsburg, VA

PROFESSIONAL REGISTRATION:

Registered Quality Engineer, California
Registered Mechanical Engineer, Massachusetts

PROFESSIONAL AFFILIATION:

Senior Member, American Society for Quality Control
Member, American Society of Mechanical Engineers
Member, ASME Main Committee on Nuclear Quality Assurance
Vice Chairman, Subcommittee on Personnel Qualifications

PROFESSIONAL EXPERIENCE:

Mr. Trainor, Vice President, Quality Assurance, has in excess of 20 years of extensive experience in quality assurance, construction, engineering, and project management of fossil and nuclear power generation projects. Prior to his association with Cygna, he was associated with a major architect/engineer for eight years serving as Manager of their Quality Assurance Department and Chief Engineer of the Engineering Assurance Division. During this period, he developed the first Quality Assurance Program approved by the then Atomic Energy Commission for an engineer-constructor. Additionally, he developed management systems needed for the effective management of a multi-faceted domestic and international quality assurance organization.

Mr. Trainor was previously associated with the shipbuilding industry in Quincy, MA for thirteen years. At that time he was responsible for the establishment of an S5W Submarine Reactor Plant Test Program and the development and management of the DLG(N)25 Nuclear Power Unit installation program. Other assignments held by Mr. Trainor included

Project Manager - Special Projects, Process Engineering Manager with responsibilities for manufacturing and industrial engineering, applied research and development and industrial laboratories, and Manager, Nuclear Quality Control, with responsibility for all aspects of quality assurance and control in the design, construction and overhaul of naval Nuclear Power Plants and Facilities.

Prior to his association with the shipbuilding industry, Mr. Trainor was employed by a chemical company complex in Springfield, MA, where he designed and constructed steam generating and chemical processing facilities.

PART 3[1]

TYPICAL SUPPORT PERSONNEL

[1]QA Personnel Only

CAMILLO A. DINUNZIO

EDUCATION:

B.S., Civil Engineering Technology, Wentworth Institute, Boston, MA
A.S., Architectural Engineering Technology, Wentworth Institute, Boston, MA
Civil Engineering Courses, University of Arizona, Tuczon, AZ

PROFESSIONAL AFFILIATIONS:

Member, American Concrete Institute (ACI)
Member, Massachusetts Construction Industry Board (MCIB)
Member, American National Standards Institute (Post alternate member on N45.2.9 work group)

PROFESSIONAL EXPERIENCE:

Mr. DiNunzio has been involved in the field of quality assurance and quality control for nine years. During these years, his experience has ranged from field and shop testing and inspection to the development of quality assurance programs for both the nuclear and fossil power generation industry. As a Project QA Engineer at Cygna, he is responsible for all QA tasks on his assigned projects.

Before working for Cygna, Mr. DiNunzio was employed as a Project Quality Assurance Engineer for an architect/engineering (A/E) firm. In this position, Mr. DiNunzio was responsible for establishing a quality assurance program for a fossil powered generating plant and performed quality assurance tasks, such as specification reviews, supplier bid evaluations and surveys, shop inspections, field surveillances, client liaison, and manpower estimates. Mr. DiNunzio was also assigned to perform surveillance of on-site contractors performing civil/structural activities at the Seabrook Nuclear Power Plant.

Prior to that, Mr. DiNunzio was employed by a major east coast A/E firm as a Quality Assurance Engineer. In this capacity, he was assigned to various field and headquarter locations to develop and implement quality assurance programs, procedures, and licensing documents used during all phases of nuclear power plants.

Mr. DiNunzio's earlier experience was with a materials technology company, where he was engaged in the inspection and testing of concrete and soils for the commercial construction industry.

ROBERT D. BUSSEY

EDUCATION:

Associate Degree, Civil Engineering, University of Colorado, Boulder, Colorado
Associate Degree, Science and Business Managemenr, Fisher Junior College, Boston, MA

PROFESSIONAL ACTIVITIES:

Member, American Society for Quality Control

PROFESSIONAL EXPERIENCE:

Mr. Bussey has over 16 years experience in management and quality assurance, primarily in the nuclear industry and in the area of auditing all aspects of nuclear power plant projects.

Mr. Bussey's most recent experience was as a member of a utility's quality assurance staff. Previously, Mr. Bussey was with Stone & Webster Engineering Corporation. His last position was as Project Quality Assurance Supervisor for the Nine Mile Point #2 project. He was responsible for the administration of the field quality control organization, procurement quality control functions, all project related auditing activities and direct interface with the client, Niagara Mohawk Power Corporation. For over three years Mr. Bussey was Supervisor of the Audit Section of the QA Department and was qualified as a Level III Auditor. His responsibilities included planning, scheduling, conducting and reporting of audits which were performed to provide an assessment of the adequacy of and personnel compliance to the quality assurance program. Audits included all construction sites (with emphasis on the civil, structural, initial piping, and mechanical work) and headquarters project activities. Mr. Bussey was initially assigned as an engineer in the Audit Section and participated in planning and performing audits.

In his earlier positions, Mr. Bussey gained valuable experience as the Quality Control Manager of Boston Insulated Wire and Cable Company, Quality Control Manager and later Operations Manager of the Anzac Division o Adams Russell Company, Inc., and as a Quality Assurance Auditor for the Sylvania Electronics Division of GTE.