FENOC

FirstEnergy Nuclear Operating Company

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Docket Number 50-346

License Number NPF-3

Serial Number 1-1377

July 12, 2004

Mr. James L. Caldwell, Administrator
United States Nuclear Regulatory Commission
Region III
2443 Warrenville Road, Suite 210
Lisle, IL 60532-4352

Subject: Submittal of Engineering Program Effectiveness Independent Assessment Plan for the Davis-Besse Nuclear Power Station

Dear Mr. Caldwell:

The purpose of this letter is to submit the assessment plan and related information for the independent outside assessment of the Davis-Besse Nuclear Power Station (DBNPS) Engineering program effectiveness. The Nuclear Regulatory Commission (NRC) letter, dated March 8, 2004, "Approval to Restart the Davis-Besse Nuclear Power Station, Closure of Confirmatory Action Letter, and Issuance of Confirmatory Order," (letter Log 1-4524) requires submittal of the identity of the outside assessment organization, including the qualifications of the assessors, and the scope and depth of the assessment plan ninety (90) days prior to the assessment.

In accordance with the Confirmatory Order, the FirstEnergy Nuclear Operating Company (FENOC) is submitting its Assessment Plan, including the identification and qualifications of the assessors, for the area of Engineering program effectiveness. This Assessment is scheduled to commence on October 11, 2004, and will last approximately two weeks.

If you have any questions or require further information, please contact Mr. Clark A. Price, Project Manager - DBNPS 0350 Process and Confirmatory Order, at (419) 321-8585.

Sincerely yours,

AWB

Attachments

JUL 14 2004

cc: USNRC Document Control Desk
J. A. Grobe, Chairman NRC 0350 Panel
DB-1 NRC/NRR Senior Project Manager
DB-1 Senior Resident Inspector
Utility Radiological Safety Board

COMMITMENT LIST

The following list identifies those actions committed to by FENOC's Davis-Besse Nuclear Power Station (DBNPS) in this document. Any other actions discussed in the submittal represent intended or planned actions by the DBNPS. They are described only for information and are not regulatory commitments. Please notify the Manager - Regulatory Affairs (419-321-8450) at the DBNPS of any questions regarding this document or associated regulatory commitments.

COMMITMENTS	DUE DATE
None. Serial 1-1377 contains no new commitments.	N/A

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Attachment 2

Independent Engineering Assessment Plan

(5 pages to follow)

FENOC Davis-Besse Engineering Assessment Plan

NUMBER:
2004-0102

ASSESSMENT AREAS:

Engineering program effectiveness of modifications, calculations, system engineering, corrective action program utilization, and selected additional areas.

PURPOSE:

The purpose is to provide an independent and comprehensive assessment of the Engineering program effectiveness at the Davis-Besse Nuclear Power Station. The assessment will be performed in accordance with the requirements of the March 8, 2004, Confirmatory Order Modifying License No. NPF-3, and Davis-Besse Business Practice DBBP-VP-0009, Management Plan for Confirmatory Order Independent Assessments. The assessment will be used to identify areas for improvement, requiring corrective actions with action plans. The assessment will also be used to assess the rigor, criticality, and overall quality of available Davis-Besse internal self-assessment activities in the Engineering program areas listed above.

SCOPE:

The Independent Assessment Team will assess the following Engineering program areas:

1. Plant Modification process
2. Calculation process
3. System Engineering
4. Corrective Action Program (CAP)
5. Additional selected areas
6. Effectiveness of self-assessments

The Assessment Team will assess conduct of the following activities:

1. Plant Modification Process

The team will perform a review of activities to assess the effectiveness of the plant modification process:

a. Selection and prioritization of potential modifications
b. Efficiency of the modification process (graded approach, at risk changes)
c. Owner acceptance sub-process (review of contracted work)
d. Quality of modification packages
e. Closeout of modification packages and supporting document updates
f. Effectiveness of modifications in fixing known problems
g. Known process problems and progress in solving
h. Interaction and support from parallel processes
i. Workload management

2. Calculation process

The team will assess the following attributes of the plant calculation process:

a. Acceptance criteria
b. Questioning attitude
c. Technical rigor
d. Margin management and allocation, propagation of engineering requirements for operation and maintenance
e. Linkages and consistency with other calculations
f. Preservation of design bases
g. Documentation/traceability/attribution
h. Calculation health and improvement process
i. Known process problems and progress in solving
j. Interaction and support from parallel processes
k. Workload management

3. System Engineering Programs and Practices

The team will investigate the following items:

a. System Health evaluation and reporting
b. Process for prioritizing, communicating, and resolving health deficiencies
c. Process for addressing system health deficiencies -- what corrective activities actually get done -- work week survival
d. Equipment Reliability Improvement Program
e. Maintenance Rule system monitoring and trending
f. Restart issues and lessons learned
g. Experience and expertise, including use of operating experience
h. Margin awareness and margin allocation
i. Known process problems and progress in solving
j. Interaction and support from parallel processes
k. Workload management

4. Implementation of the Corrective Action process by Engineering

The team will assess the following:

a. Evaluate the impact of the backlog and backlog trend on organizational and operational effectiveness
b. Quality of evaluations/resolutions (including use of critical thinking concepts and operating experience)
c. Effectiveness of recurrence control
d. Work management and backlog management
e. Support of corrective actions assigned to others
f. Site to site and multiple plant Condition Reports

g. Root Cause Analyses techniques and management component of cause description
h. Use of Condition Report process for action items tracking
i. Known process problems and progress in solving
j. Interaction and support from parallel processes
k. Workload management

5. Other Areas

a. Engineering interfaces
   - Providing design and licensing basis information to others
   - Requests for assistance
   - Problem solving and troubleshooting – roles and division of responsibility
   - Engineering perspective and influence on plant operations and maintenance
   - Engineering support of other processes (work control, technical procedure development, procurement)
   - Engineering information formulation and presentation, receptivity of and interaction with operations, maintenance, and management
b. Programs effectiveness monitoring (including Training & Qualification element)
c. Change management – reorganization, new standards

6. Effectiveness of Davis-Besse Assessment Activities

The Assessment Team will evaluate the effectiveness of the Davis-Besse Nuclear Power Plant's assessment activities associated with the implementation of Engineering programs:

a. Aggressiveness in developing and correcting self-assessment findings. Adequacy, timeliness, and prioritization of corrective actions.
b. Aggressiveness in developing and correcting assessment (internal oversight, Engineering Assessment Board (EAB), and Corporate Nuclear Review Board (CNRB)) findings. Adequacy, timeliness, and prioritization of corrective actions.
c. Receptivity and responsiveness of management and staff to issues raised in self-assessments and assessments

<u>INDEPENDENT ASSESSMENT TEAM</u>:

John Garrity, Marathon Consulting Group, Team Leader
Paul Borer, Marathon Consulting group
Harold Baumberger, Marathon Consulting Group
Bradley Adams, Site Engineering Director, Byron Nuclear Station, Exelon Nuclear
John Meyer, Design Engineering Analysis Manager, Comanche Peak, TXU Energy
Tom Vine, Manager, Engineering Programs, Duane Arnold Energy Center

Biographies attached.

FENOC Davis-Besse Engineering Assessment Plan

SCHEDULE:

- June 9 through July 7, 2004, develop, review and submit assessment plan to NRC.
- July 12, 2004, send selected documentation to team members to begin off-site preparations.
- October 10, 2004, assessment team will assemble at the plant for final assessment preparations.
- October 11- 22, 2004, conduct onsite assessment and provide Davis Besse with preliminary results prior to leaving site.
- Final team assessment report will be provided to Davis-Besse within 14 days after the completion of the on-site assessment.
- Final Davis-Besse assessment report and action plans (if required by findings) will be submitted to the NRC within 45 days of the completion of the on-site assessment.

ASSESSMENT METHODS:

The Independent Assessment Team will use DBBP-VP-0009 "Management Plan for Confirmatory Order Independent Assessment" as the basis for conducting the assessment.

The assessment methodology may include, but is not limited to, any combination of the following:

- Observing activities
- Interviewing personnel
- Reviewing documentation
- Evaluating or performing trend analysis
- Reviewing procedures, instructions, and programs
- Comparing actual performance levels with pre-established performance indicators

The following general standards will apply to the assessment of Davis-Besse Engineering program implementation:

- Modification and calculations reflect in-depth reviews of problems and resolutions that support a high level of nuclear safety.
- Engineers demonstrate knowledge and understanding of the design basis, including maintenance of design basis documentation.
- System engineers demonstrate intolerance for failures of critical equipment.
- Engineers maintain clear ownership of corrective actions from initiation through resolution.
- A rigorous approach to problem solving and application of engineering procedures and methods is used.

The assessment team will review the referenced procedure/documents during the preparation period prior to site arrival.

FENOC Davis-Besse Engineering Assessment Plan

REFERENCES:

Confirmatory Order dated March 8, 2004
DBBP-VP-0009 "Management Plan for Confirmatory Order Independent Assessment"
NOP-CC-2003, Engineering Changes
NOP-CC-3002, Calculations
NOP-LP-2001, Condition Report Process
Past NRC inspection reports (CATI, RRATI) that are applicable to the area assessed
Past applicable Self-Assessments
QA quarterly assessments for past three quarters
CNRB meeting minutes from last three CNRB intervals.
Applicable Section or area Performance Indicators

ASSESSMENT PLAN APPROVALS:

Prepared by: John H Garrity Date: 7/2/04
John H. Garrity, Assessment Team Lead

Approved by: Clark A. Price Date: 7/2/04
Clark A. Price, Project Manager

Approved by: Ralph Hansen Date: 7/2/04
Ralph Hansen, Executive Sponsor

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Attachment 3

Independent Engineering Assessment Plan
Assessors and Qualifications

(6 pages to follow)

John H. Garrity
President and Chief Executive Officer (CEO)
Marathon Consulting Group

- 1994-present: *Marathon Consulting Group*; President and CEO - Responsible for Marathon client service operations, and selected personal consulting engagements. Engaged in expert consulting in the area of process performance monitoring and improvement, management mentoring, process centered team formation and compensation, configuration management, business plan and corporate strategy development, process improvement training, and project management training. Also conducted root cause and collective significance analyses of client situations, and participated or lead high impact teams to resolve problems.
- 1993-1994: *New York Power Authority*; Resident Manager - Placed in charge after unit was shut down under NRC confirmatory action letter and on problem plant list. Responsible for developing and executing plan to resolve problems in context of intense political pressure and company senior management turnover. Numerous escalated enforcement actions from actions of earlier periods mitigated by effective, aggressive management investigations and corrective actions.
- 1992: *TVA Bellefonte*; Site Vice President - Responsible for all ongoing activities necessary to reactivate the project from deferred status.
- 1990-1992: *TVA, Watts Bar*; Site Vice President - Responsible for all activities necessary to progress completion of the Watt's Bar units, including engineering, construction, startup, operational readiness, and commissioning. Formulated management objectives for restart of construction following stand down and significant regulatory involvement. Reengineering of design engineering and construction processes, restart of construction, outsourcing construction labor, engineering, and management. Instituted management performance accountability through site wide self-monitoring program, based on principles of TQM. Significant improvement of site nuclear performance, left site positioned for successful completion. Credibility with NRC restored. Significant process performance improvement results in engineering design, engineering analysis, construction engineering, construction, and corrective action.
- 1990*: Maine Yankee Atomic Power Co*; Assistant to President - Special projects assignment, including work on low level waste disposal options available to company and state.
- 1989-1990*: Maine Yankee Atomic Power Co*; Vice President Engineering and Licensing - Responsible for nuclear engineering, plant engineering, licensing, and operations support.
- 1988-1989*: Maine Yankee Atomic Power Co*; Assistant Vice President Engineering and Quality Programs - Responsible for quality assurance, nuclear engineering, licensing and plant engineering.
- 1984-1988*: Maine Yankee Atomic Power Co*; Plant Manager/Senior Site Manager - Responsible for site operations.
- 1984*: Maine Yankee Atomic Power Co*; Assistant Refueling Manager - Special assignment, monitored several dozen engineering projects and coordinated activity with overall refueling effort.
- 1980-1984: *Maine Yankee Atomic Power Co;* Director, Nuclear Engineering and Licensing - Responsible for overall coordination of reload design, plant safety analysis and nuclear engineering analysis of plant systems, emergency planning, and radiological monitoring.

Paul J. Borer
Consultant
Marathon Consulting Group

- 2002-present: *Marathon Consulting Group* - Performed Safety Culture and Engineering Effectiveness Assessments.
- 1986-2002: *Institute of Nuclear Power Operations (INPO)*-Held the following positions:
  - Senior Representative for Assistance - Management consulting role. Responsible for formulating performance improvement plans for several nuclear stations. Provided direct feedback to senior station management on performance issues. Prioritized deployment of INPO assistance resources.
  - Division Director, Plant Operations Division - a technical INPO division responsible for evaluation of Operations, Chemistry, and Radiation Protection areas. Involved in setting standards for evaluations, responsible for the evaluator training program, and assisting the industry in attaining standards of excellence.
  - Detroit Edison Vice President - Nuclear Generation (On - loan from INPO 1997-1998) Responsible for all aspects of Operation, Maintenance, and Engineering of a large scale BWR. Led a plant staff of approximately 500.
  - Vice President, Nuclear Engineering - New York Power Authority (On - loan from INPO 1993-1994). Responsible for Design Engineering at two nuclear generating stations. Developed and implemented a plan to deploy corporate design engineering resources to the stations in order to be more responsive to station needs.
  - Department Manager - Managed four INPO departments (Emergency Preparedness, Operating Experience Applications, Technical Support, and Operations) - Responsible for the evaluation of their respective areas of plant performance and various assistance programs. Also functioned as a Team Manager and lead teams of 15-20 INPO and industry professionals during performance-based nuclear plant and corporate evaluations.

  Held a Senior Reactor Operator's License - Boiling Water Reactor and Licensed Professional Engineer - Mechanical.
- 1985: *Engineering, Planning, and Management, Inc.*; Project Manager - Responsible for the overall conduct of work, sales, budget, schedule, client relationship, and quality of products for EPM clients in the Southeastern U.S.
- 1983-1984: *Smith Barney, Harris Upham, and Company*; Account Executive - Responsible for retail securities sales, client development, securities research, financial planning advice.
- 1976-1983: *Cooper Nuclear Station*; Served in various management positions, all reporting to the site manager. (Operations Manager, Engineering Manager, Chemistry and Radiation Protection Manager)
- 1970-1976: *U. S. Navy;* Completed the Naval Nuclear Power Training Program and served aboard a nuclear submarine.

Harold E. "Rusty" Baumberger
Vice President and Director, Performance Assessment
Marathon Consulting Group

- 1996-present: *Marathon Consulting Group*; Responsibilities include the following:
  - Vice President and Director, Performance Assessment - Responsible for business areas of independent assessment, INPO evaluation and NRC inspection support, Design Basis assessments, and Maintenance Rule implementation. Also serve as Marathon's Quality Assurance Manager.
  - Executive Lead, Transition for the Vermont Yankee Nuclear Power Corporation - Managed the implementation of the sale agreement and transition of the Vermont Yankee station to new ownership. Reported directly to the President & CEO.
  - Quality Assurance Manager - Developed and implemented Quality Assurance Program, obtained NUPIC certification, trained and certified lead auditors. Provided interface with client QA Managers.
  - Configuration Management Supervisor at Cooper Nuclear Station - Worked in environment of high regulatory scrutiny to improve Engineering performance and develop recovery strategies. Responsible for maintaining Design Basis and resolving Design Basis and Configuration Control issues. Managed Modification Process, Design Criteria Program, Equipment Classification Program, Equipment Data File, and Drawing Control Program.
  - Served as a Safety System Functional Evaluation team member in the area of Operations at Beaver Valley - Reviewed the 4kV Electrical Distribution and Emergency Diesel Generator systems for Unit 2.
  - Provided expert consulting related to INPO-related issues at River Bend - Participated in major assessment covering the new INPO Performance Objectives, existing INPO findings, and items from the Long Term Performance Improvement Program.
  - Participated in a component-level design basis review of non safety-related systems and outage work at Dresden - Documented review of over 7000 components against Design Basis, FSAR requirements, original system and component specifications, and vendor-supplied data.
  - Performed assessment of Design Basis programs at Vermont Yankee including Design Basis document program development.
  - Participated on corporate Engineering Independent Safety Assessment Response Team at Maine Yankee.
- 1990-1996: *Independent Consultant;* Provided services to nuclear utilities and Department of Energy (DOE) contractors in management, safety review, quality assurance and performance areas. Performed audits and independent assessments of overall performance, outage management, maintenance and configuration management programs.
- 1988-1990: *Liberty Consulting Group*; Senior Consultant - Led evaluations of management capability at nuclear power plants in all areas of facility operation. Conducted assessment of plant performance against INPO standards.
- 1980-1988: *Institute of Nuclear Power Operations (INPO)*; Evaluator/Senior Evaluator - Performed evaluations of more than 50 commercial nuclear power stations in areas of Maintenance, Engineering Support, and Organization and Administration. Participated in accreditation reviews of utility training programs.

Bradley J. Adams
Site Engineering Director
Exelon Nuclear Corporation

- 2003-present: *Exelon - Byron Nuclear Station*; Site Engineering Director - Provide overall proactive management of the site engineering function including Systems Engineering, Design Engineering, Engineering Programs, and Information Technology. Accountable for site engineering department budget, short-term and long term staffing, development, compensation, and related human resource needs for 95 assigned employees. Participate as a key station manager in the business planning and performance review process including integration with the overall Exelon business planning process. Manage the execution of contracted A/E services as they pertain to the site engineering function.
- 2002-2003: *Exelon - Byron Nuclear Station*; Superintendent of Electrical / I&C Maintenance - Direct management of the Electrical Maintenance and Instrumentation & Control Maintenance Departments at the Byron Nuclear Station. This included 22 management personnel and 73 represented personnel in the 2 departments.
- 2000-2002: *Exelon - Byron Nuclear Station*; System Engineering Manager - Responsible for direct management of the 40-person System Engineering organization. Successful in developing and implementing state of the art performance centered maintenance templates for Byron Station and the Exelon Nuclear Fleet.
- 1998-2000: *Exelon - Byron Nuclear Station*; Regulatory Assurance Manager - Managed the regulatory interface for Byron Station with the U.S. Nuclear Regulatory Commission, Illinois Department of Nuclear Safety, OSHA, Illinois and Federal EPA, and other regulatory agencies. During this period, assigned to key position with the Merger Integration Team to facilitate year-long effort to merge the former ComEd and PECo utilities into the Exelon Corporation. This effort included evaluation of assets, management of governance and oversight structure, and other key attributes of merger activities.
- 1995-1998: *Exelon - Byron Nuclear Station*; Staff Engineer - Design Engineer in the Mechanical Support Group of the Byron Site Engineering organization. In previous years was responsible for implementation of various process improvements to increase efficiency and improve quality of the engineering products delivered by the department. Involved in proactively increasing the knowledge base of personnel throughout the ComEd nuclear division by assisting the Nuclear Training Department in the development and presentation of various continuing education classes.
- 1991-1994: *ComEd Corporate Regulatory Assurance;* Licensing Engineer - Served as Generic Licensing Specialist in the Nuclear Engineering & Technology Services Department. Was responsible for helping ensure regulatory consistency between ComEd's six nuclear generating stations. Also responsible for generating major technical licensing submittals from ComEd to the USNRC.
- 1983-1991: *ComEd Corporate Nuclear Fuel Services*; Design Engineer - Qualified Nuclear Design Engineer. Promoted twice within ComEd's Nuclear Fuel Services Department to Design Group Leader with responsibility for direct supervision of eight engineers performing engineering design analyses for ComEd's entire fleet of 6 pressurized water reactors.

John W. Meyer
Design Engineering Analysis Manager
TXU Power – Comanche Peak

- 2003-present: *Comanche Peak Steam Electric Station (CPSES)*; Design Engineering Analysis Manager - Founding Manager of a unit in the Technical Support Department at Comanche Peak Steam Electric Station (CPSES). Responsible for maintenance of the CPSES Design and Licensing Basis, design reviews, adverse condition report engineering resolution, industry operating event research and resolution, emergent operational problem resolution, consultation, engineering human performance, and the CPSES design control program. Provides analytical support for CPSES in such areas as radiation analysis, control room habitability, systems interaction, environmental barriers, thermal/hydraulic analysis, loss of ventilation analysis, tornado venting, electrical calculations, and civil/structural analysis.
- 1998-2003: *CPSES;* Engineering Analysis Manager - Managed a multi-disciplined staff of Consulting and Senior Engineers in the Reactor Engineering Department responsible for analytical support of CPSES in such areas as radiation analysis, control room habitability, systems interaction, environmental barriers, thermal/hydraulic analysis, containment analysis, loss of ventilation analysis, and tornado venting. In addition, managed the efforts of the Risk and Reliability Supervisor. The Risk and Reliability group was responsible for maintaining the CPSES IPE and IPEEE and for all plant PRA and Risk assessment activities.
- 1996-1998: *CPSES*; Design Basis Engineering Supervisor - Responsible for maintenance of the CPSES Design and Licensing Basis, Master Equipment List maintenance, design reviews, adverse condition report engineering resolution, industry operating event research and resolution, emergent operational problem resolution, and implementation of reengineered electronic processes for design control and corrective action programs.
- 1992-1996: *CPSES*; NSSS and HVAC Systems Supervisor - Responsible for Design Engineering support on CPSES Nuclear Steam Supply System, HVAC, and Fire Protection Systems. Supervised a senior staff of engineers to provide design modification engineering, temporary modification engineering review, adverse condition report engineering resolution, industry operating event research and resolution, and emergent operational problem resolution.
- 1987-1992: *CPSES*; Principal Engineer - Staff Assistant to the Manager, Plant Engineering at CPSES. Founding member of Operations Support Engineering, formed to provide immediate design engineering support to CPSES Operations during transition from construction to Unit 1 operation. NSSS expert assigned to the Primary Plant Systems group of the on-site CPSES corporate engineering department.
- 1974-1987: *Westinghouse Electric Corporation*; Senior Project Engineer - Served as Nuclear Systems Engineer in the CPSES site office. Senior Field Service Engineer - Performed field services at operating and construction PWR projects. Engineer/Senior Engineer B - Responsible for schedule control of a major subcontractor on the Clinch River Breeder Reactor Plant.
- 1969-1973: *U. S. Navy*; Completed Naval officer nuclear power training qualifying for supervision, operation, and maintenance of Naval Pressurized Water Reactors. Assigned to a Sturgeon Class Nuclear Attack Submarine.

Thomas V. Vine
Engineering Programs Manager
Nuclear Management Company

- 1991-present: *Nuclear Management Company, Duane Arnold Energy Center*; Positions held include the following:
  - Manager, Engineering Programs - Responsible for implementation of the following plant programs: Predictive Maintenance, Preventative Maintenance, ASME Code Compliance, Welding, Non Destructive Testing, In Service Inspection, In Service Testing, Motor Operated Valves, Air Operated Valves, Maintenance Rule, Thermal Performance, PRA EQ and Fire Protection. Direct reports include two Supervisors and 20 Program Engineers and Analysts. Additional responsibilities include Program Owner for the Engineering Programs, Technical Training Program.
  - Project Engineer, Spent Fuel Storage - Responsible for the design and construction of an Independent Spent Fuel Storage Installation (ISFSI) licensed under 10CFR72. Directly responsible for oversight of Architect/Engineers for ISFSI and plant security modifications as well as on-site contractors performing design, licensing and construction activities for the project. Also provided technical input into procurement and fabrication of components required for dry spent fuel storage.
  - Supervisor, Radwaste - Responsible for oversight and supervision of the Radwaste Department which is responsible for liquid processing, solids processing, wet waste disposal, cask handling, packaging and shipping of radioactive materials. Direct reports include twelve Radwaste Operators and two Health Physicists. Additional responsibilities include serving as a member of the plant Operations Committee, Program Owner of the Radwaste Training Program as well as being a member of the ASME/EPRI Radwaste Subcommittee. Significant accomplishments: Spent Fuel Shipment in support of GE Nobel Chem fuel analysis. Innovative water processing technology such as UV/Ozone organics removal system. Aggressive program to evaluate reduced resin dosage on condensate filter demineralizers. Implementation of new design pleated filters in condensate filter demineralizers to improve Feedwater iron control.
  - Principal Engineer, Systems Engineering - Responsible for oversight of the following systems: Cranes, Radwaste (processing and shipping), Structures, HVAC, Aux Boiler, Reactor Recirculation, Additional responsibilities: Heavy Loads Coordinator, Project Leader for various major maintenance activities. Significant accomplishments: Engineering support for Fuel Pool Re-rack Project. System improvements to Aux Boiler. LLRPSF HVAC modifications that solved long-standing temperature control problems. Project Leader for Recirc Pump Seal replacement to AECL CAN-2A seals.
- 1988-1991: *GPU Nuclear, Oyster Creek*; Sr. Engineer, Plant Engineering - System Engineer for Lifting & Handling, Secondary Containment, standby Gas Treatment, and Balance of Plant HVAC. Supervised project to replace 72" 16,000 LBS. butterfly valves in circulating water system utilizing innovative rigging techniques. The project involved design and fabrication of devices that allowed movement of valves over numerous obstacles. Provided engineering interface for first US installation of ABB Wet-Lift system in a BWR. Supervised major maintenance procedure upgrade project.