

# LONGENECKER and ASSOCIATES

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## Alan A. Genosi

### DETAILED EXPERIENCE

- 1994-2005     QA Senior Lead Auditor, Nuclear Assurance, Tennessee Valley Authority, Corporate Office, Chattanooga, Tennessee  
Managed and implemented the TVA Nuclear audit process (vertical slice for interfaces/horizontal review for topic activities) for Engineering, Maintenance, Operations, and Plant Support NRC-INPO topics. Managed and conducted audits using specifications from the new NRC-Reactor Inspection and Oversight Process and new NRC Performance Indicators (PIs). Assembled audit teams, supervised, directed/coached/performed, evaluated results, presented conclusions to senior management, and followed-up on audit results. Topics included design and systems engineering, modifications, maintenance, security and fitness for duty, radiological control, chemistry, environmental monitoring, emergency preparedness, ASME III & XI programs, and plant lay-up activities. Participated in the Nuclear Industry Evaluation Program (NIEP) Evaluation/Audit program, and the former Cooperative Management Audit Program (CMAP) to obtain industry experts, provide oversight to trend audit and assessment/surveillance results, and provide oversight in development/analysis of other nuclear power implementing programs. Managed the development and improvement of audit/assessment techniques and tools for NRC's initiatives with the TVAN oversight program.
- 1994-1994     QA Lead Audit Specialist, Nuclear Assurance, Tennessee Valley Authority, Watts Bar Nuclear Plant, Spring City, Tennessee  
Managed, assembled teams, performed, analyzed results, presented conclusions to senior management, and followed-up on audits and assessments of operations, engineering, technical support, modifications, maintenance, security, radiological control, environmental monitoring, FFD, and other nuclear power implemented programs. Provided oversight assessments of Operational Readiness Programs for WBN (e.g. special nuclear material, materials and procurement, document control and records management, non-radiological environmental monitoring, design and systems engineering programs) required for start-up and plant operation. Managed, directed, and perform oversight activities of TVA and Contractors.
- 1989-1994     QA Specialist-Engineering and Design, Quality Assurance, Tennessee Valley Authority, Watts Bar Nuclear Plant, Spring City, Tennessee  
Supervise the WBN audit program upon manager's absence. Planed, assembled teams, supervised, directed/performed, evaluated results, presented to upper-level management, and followed-up quality technical, program audits, and assessments of nuclear plant engineering and design activities that included: design baseline, civil/structural, mechanical, and electrical items; design change development and control; procurement documents, drawings, specifications, field engineering activities, modification constructability, work plan implementation, corrective action and quality related records. Performed and followed-up on audits and assessments for nuclear plant maintenance, technical support, and radiological effluent and environmental monitoring activities to meet technical specification commitments.

- 1987-1989 Senior Lead Auditor, Engineering Assurance, Nuclear Engineering, Tennessee Valley Authority, Knoxville Tennessee  
Planned, directed and performed technical audits and surveillance on engineering and design activities. Evaluated and reviewed technical procedures and procurement documents to assure quality of performance and compliance with technical and quality assurance requirements. Oversight Responsibilities included determining the adequacy of programs for design bases verification; replacement parts; mechanical and electrical equipment; piping and hanger installations; corrective action associated with NRC Design Inspections (IDI, SSEI), and Safety Evaluations (SSQE).
- 1980-1987 Engineering Assurance Engineer & Lead Auditor, Stone & Webster Engineering Corporation, Boston Massachusetts  
Planned, directed/performed, evaluated and reported results for technical and program audits; review and evaluation of procurement documents and project technical procedures; project implementation verification and surveillance scheduling; preaward surveys and postaward audits of contractors to assure quality of performance and compliance with technical and quality assurance requirements. Oversight responsibilities included Design Process/Readiness Review Evaluations for nuclear power plants, supporting client QA staffs at operating and construction plants, procured services contractor assessments, computer applications, ONWI-Permian Basin Waste Repository Project (NQA-1), electrical environmental and equipment seismic qualification, corrective action verification, preventive recurrence control implementation, and in-depth technical reviews of pipe stress and pipe support analyses.
- 1969-1980 Engineering Specialist, General Dynamics Corporation, Quincy Shipbuilding Division, Quincy, Massachusetts  
**Advanced Engineering Department:** Managed, directed and performed stress analyses and design of spherical aluminum tanks for Liquefied Natural Gas, cylindrical vinyl chloride cargo tanks, and rectangular molten sulfur tanks for shipborne transportation using international and national codes and standards. Directed and performed structural evaluations, computer applications, dry-docking integrity evaluations, and proposal preparations for various classes of Federal and private shipbuilding contracts.  
**Nuclear Surface Ship Project:** Managed, directed and performed vibration, dynamic and static stress analyses in design of power plant equipment, components, piping and support structure, drawing preparation, construction and design change evaluations, computer applications and ship Numerical Control (NC)/plotting for preliminary design, and weight control requirements for the Navy's CGN 36/38 Classes of nuclear powered cruisers. Provided engine room maintenance services, improvement analysis and evaluations for the Navy's CGN 25 and CGN35 nuclear powered cruisers. Computer applications included STRUDL, BOSOR4, SAGS/DAGS, INTDDAM, STRESS, etc. for design and analysis. Provided pre- and post-processor software development in FORTRAN and BASIC.
- 1966-1969 Research and Development Engineer, General Dynamics Corporation, Electric Boat Division, Groton, Connecticut  
**Basic Engineering Department:** Directed and performed computerized static

and dynamic analyses using discrete element (Finite Element) and mass techniques for complex three-dimensional beam, plate, shell, and piping structures in the shock and vibration group for the design of components, support structure, sonar domes, missile blades, ship shafts, Ships Service Turbine Generators, valves, pumps, and escape hatches for submarines and component manufacturers. Lead Engineer in the computer dynamic shock analysis program for components and equipment foundations in the nuclear surface ship program.

- 1965-1966 Structural Design Engineer, Richard J. Donovan, Inc., Winchester, Massachusetts  
Performed engineering analysis and structural design calculations for industrial and commercial buildings, foundations, and renovations to existing buildings. Directed the preparation of engineering and construction drawings.
- 1964-1966 Teaching Fellow and Lecturer, Northeastern University, College of Engineering, Boston Massachusetts  
Lectured upper classmen and evening students in fluid mechanics, surveying principals, structural analysis, and tutored in structural steel design. Responsible for teaching engineering drawing, graphic applications and FORTRAN computer programming to freshmen.
- 1960-1965 Essex Survey Service, Civil Engineers and Surveyors, Salem, Massachusetts  
Responsible for office supervision in reduction and evaluation of survey data, design of subdivisions, sanitary (environmental) structures, planning, drainage, road design and assignment of survey parties. Interfaced for desires and expectations with clients, attorneys, city/town planning boards, and FHA/VA approval organizations. Co-op assignments from rod man to party chief and office management assignments.

## EDUCATION

- Northeastern University - MS Civil Engineering
- Northeastern University - BS Civil Engineering
- University of Connecticut- Mechanical Vibrations, Plates & Shells
- Northeastern University - 30 Hrs towards MBA degree

## LICENSES AND REGISTRATIONS, CERTIFICATIONS, SECURITY CLEARANCES

- Professional Structural Engineer - Massachusetts #26230
- TVA: Lead Auditor Qualification to ANSI N45.2.23
- General Dynamics: Department of Defense-Secret & Department of Energy-L clearances.

## PROFESSIONAL ASSOCIATIONS

- American Society of Civil Engineers (ASCE), Tennessee Section ASCE, Boston Society of Civil Engineers Section ASCE, Chi Epsilon - Civil Engineering Honor Society