

Donald W. Prigel

EXPERIENCE SUMMARY

Dr. Prigel is a management and technical services consultant specializing in project management, quality assurance, engineering, safety and authorization basis, and solving energy, environmental and regulatory issues. He has over thirty years of nuclear experience including serving in leadership positions at nuclear power plants and non-reactor nuclear facilities. He specializes in tailoring management systems to the hazards and risks associated with specific work activities. He has a proven record of helping clients find and resolve problems in a timely and cost efficient manner.

Commercial Nuclear Services have included:

- New reactor license application preparation*
- Quality Assurance Program development and implementation*
- Regulatory compliance*
- NEI New Reactor Quality Assurance Task Force participant*
- NQA-1 program management subcommittee *
- Led the development what is believed to be the first NQA-1-2008, 1a-2009 Quality Assurance program submitted to the NRC*
- Graded approach program development specialist*
- Strategic Planning
- Plant protective system testing
- Construction engineering
- Startup testing
- Quality Assurance NRC Topical Reports
- Fuel audits
- Operations Quality Assurance
- Supply Chain Management
- Permanent Plant staffing
- Plant walk-downs
- Readiness reviews

*Current activities

Government Nuclear Services have included:

- Led development and implementation of Quality Assurance programs
- Led Operational Readiness Reviews
- Led review and audit teams
- Risk Analysis

- Deterministic and Probabilistic Risk Assessments
- Failure Mode and Effect Analysis (FMEAs) specialist
- Strategic Planning
- Led development of digital test and control equipment
- IEEE National Student Scholar Award for his work in developing digital radiation detection equipment
- ES&H program leadership
- Supply Chain Management

Enrichment Support Services have included:

- Americanization of European design
- Design Control
- Configuration and change management
- Procurement engineering
- Corrective action coordination
- Field/Construction engineering
- NQA-1 quality assurance
- Procedure development and documentation
- Served as Environmental Officer at an enrichment facility
- Mentored permanent site personnel in
 - Site construction safety
 - Environmental compliance
 - Radiation Safety
 - Nuclear material control and accountability

Prigel has a BS and MS in Nuclear Engineering, and a doctorate in Strategic Leadership. He obtained a Professional Engineering License from the State of California. Prigel is also a member of ASME, ASQ, ANS, and IEEE. He is a senior member of the American Society for Quality, and was a member of the ASQ committee that authored ANSI/ASQ E4, Quality Systems for Environmental Data and Technology Programs. He is a participant in the NEI New Plant Quality Assurance Task Force and assisted with the development of the NRC approved NEI QAPD template (NEI 06-14) which provides approved methods for meeting the requirements of 10 CFR Part 50, Appendix B and Regulatory Guide 1.28.

Prigel is a coauthor of the latest version of the DOE product quality standard. He participated in the development and comment resolution process for the currently proposed revision of DOE Order 414.1 and for the current version of 10 CFR830. He is proficient in developing and implementing quality management systems to comply with 10CFR50, 10CFR70, 10 CFR830,

DOE Order 414.1, and a variety of nationally and internationally recognized quality standards including ASME NQA-1, Quality Assurance Requirements for Nuclear Facility Applications, ANSI N18.7, Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants, ANSI/ASQ Z 1.13, Quality Guidelines for Research, and ANSI/ISO/ASQ Q 9001-2000, Quality Management Systems. He is an active member of the Energy Facility Contractors Group (EFCOG) Integrated Safety/Quality Assurance Working Group. Prigel has served as a Quality Subject Matter Expert for the DOE since 1992.

"Don brings a rich scientific and management background of the highest quality to his work. He is dedicated to providing his customer with services that meet expectations in every way. His ethics are above reproach as are his abilities to work smoothly with others and provide an overall pleasant work environment. It has been my pleasure to collaborate with Don over a long-term. He is one of the best in his field." Robert Hymer, Retired DOE Senior Manager

Prigel has led initiatives to improve efficiencies and operations using Lean, Six Sigma, and other process improvement tools, and has mentored process improvement teams at numerous DOE facilities.

Prigel is a strategic thinker capable of communicating corporate vision and obtaining individual commitment to that vision. He is a skilled coach and mentor. His doctoral studies focused on strategic foresight and on systems engineering, examining how complex engineering projects should be designed and managed. He possesses broad business expertise and financial analysis skills having served as Vice President of a Fortune 500 company. He is proficient at selecting, developing, and evaluating personnel to ensure efficient operation.

DETAILED EXPERIENCE

2002 to Present, Self-Employed Senior Consultant (Partial Listing of Clients)

Client: Battelle Energy Alliance, Next Generation Nuclear Plant (NGNP)

As their Quality Director, Prigel leads the Quality Assurance organization preparing for the licensing of the Next Generation Nuclear Plant, the next US gas cooled nuclear plant. Prigel was selected for this position after a nationwide search as a result of his specific and unique experience in developing new QA programs and tailoring those programs to fit both DOE and NRC requirements. He is a part of the NGNP senior leadership team. Prigel updated the NGNP Quality Assurance Program Description (QAPD) to address the regulatory position presented in the NRC Regulatory Guide 1.28, Revision 4, which presents a qualified endorsement of ASME NQA-1-2008, 1a-2009. Throughout and following implementation of the QAPD, the NGNP Project has remained in DOE contractual compliance with NQA-1-2000, and with implementation of the QAPD becomes compliant with the NRC regulatory position on NQA-1-2008, 1a-2009 as documented for the NGNP Project in a Safety Evaluation Report (SER) submitted for the approval of the NRC. Prior to and after issuance as the SER, the content of the



QAPD is intended to represent the NRC regulatory position on NQA-1-2008, 1a-2009, with the content being accepted by the NRC with their issuance of the SER. Prigel has been instrumental in leading this effort, believed to be the first submittal of a Quality Assurance program developed to the new Revision 4 of the Regulatory Guide 1.28.

Client: Mitsubishi Heavy Industries (MHI)

Prigel is a Quality Assurance subject matter expert advising in the Americanization of MHI's quality assurance program for their US-APWR including issues such as a graded approach to quality assurance, EPC Contractor Level QA Equipment Grade List, and Supplier quality levels.

Client: Lawrence Livermore National Laboratory, National Ignition Facility

Prigel recently led the readiness assessment team for the National Ignition Facility (NIF), independently verifying a state of readiness to implement management systems in accordance with the established safety basis. Processes verified included Design, Configuration Management, Integrated Safety, Safety Basis, Conduct of Operations, Change Control, ES&H, Laser Safety, and Maintenance. The subsequent DOE assessment resulted in no adverse findings.

"The most thorough and best assessment ever at NIF." Ralph Patterson, NIF Project Manager

He then led the Quality Assurance organization, developing policies, processes, and tools to infuse an integrated safety and quality culture in the NIF organization, including developing a corrective action process for identifying and correcting quality problems, and identifying root causes, and associated trends.

His successful integration of quality assurance and authorization basis grading tools with FMEAs led to significant savings in procurement activities.

Client: Urenco USA Uranium Enrichment Facility

Prigel implemented design control, configuration and change management, and procurement engineering processes at a chemical processing plant currently under construction. He reviewed and accepted "Americanized" European manufacturing processes and specifications for use in U.S. quality applications. He assured proper inclusion of design engineering requirements, manufacturing engineering requirements, quality and acceptance testing, and receipt inspection requirements in purchasing documents. He ensured corrective actions addressed engineering and quality assurance problems.

He served at the facility's Environmental Officer. He mentored Health, Safety and Environment facility personnel in site construction safety, environmental compliance, radiation safety, and nuclear material control and accountability.

Client: The Department of Energy, Office of Civilian Radioactive Waste Management (OCRWM)

Prigel led an assessment team reviewing of the OCRWM and Bechtel SAIC Company, LLC (BSC) quality management systems including evaluating engineering processes and procedures, and samples of OCRWM/BSC Work Products to determine compliance to Department of Energy (DOE) and Nuclear Regulatory Commission (NRC) statutes, regulations, and applicable policies.

"The information and recommendations contained in the QA and engineering assessments will assist us as we move forward with our work on the repository design. This is particularly important as we prepare to submit a credible and defensible license application to the NRC next year." DOE OCRWM Director Ward Sproat

2004, Authorization Basis Engineer, Time Solutions Corporation

Performed authorization basis activities as staff augmentation at the DOE Pantex Plant

- Implemented 10 CFR 830.203, Unreviewed Safety Question Process and DOE Guide 424.1-1, Implementation Guide For Use In Addressing Unreviewed Safety Question Requirements while preparing reports on USQs at the Pantex Plant
- Updated Documented Safety Analyses (DSAs)
- Reviewed the design requirements for safety-related design features to determine whether the controls were designed adequately to meet the safety functional requirements described in the DSAs
- Studied and documented Potential Inadequacy of the DSA (PISA) after new information was discovered

- Added adequate detail to Technical Safety Requirements (TSRs)
- Helped prepare a series of Safety Analysis Report (SAR) "modules" and various supporting documents-including the site-wide SAR-that identified and analyzed hazards associated with facility operations, transportation activities, and specific weapon systems, and credited corresponding controls to establish an authorized safety envelope for nuclear operations
- Assisted in the identification of engineered and administrative controls that were functionally classified as either safety-class or safety-significant TSRs or designated in the DSAs as "important to safety."

1993 to 2002, Program Manager, Vice President, SAIC

Vice President, Science Applications International Corporation

Prigel was responsible for the leadership of eleven technical divisions including development and implementation of Quality Assurance Programs for government organizations and commercial companies. His responsibilities included hiring qualified quality staff and leading them in implementing quality functions, development of quality procedures and revisions, review of

Purchase Requisitions/Orders, and processing of Non-Conformance/Corrective Action documents.

1989 to 1993, Mason & Hanger, Pantex Plant

Prigel led the Engineering Department responsible for test and control system development, he served as the ES&H Section Manager, Emergency Management Department Manager, and the Quality Director for the facility. He was responsible for risk management and the initial development of the authorization basis program. He was the senior manager responsible for ensuring requirements were met for products, programs, and facilities. He successfully led the integration of multiple Management Systems. He championed a major supply chain management improvement process resulting in national recognition. He was responsible for the statistical process control program, developing new and innovative approaches to measuring the work processes, a formal metrics program, a benchmarking program, a root cause program, and a trending program.

He was the initial executive sponsor of the DOE Software Quality Assurance Special Interest Group. He led audits of waste programs, environmental monitoring, construction, safety, fire protection, emergency management, and security. He managed the Facility Operations Center, including Occurrence Reporting, analyzed issues to identify programmatic and system issues, and to identified recurring issues, generic issues, trends, and vulnerabilities.

1978 – 1984, Quality Assurance Manager, Kansas Gas and Electric

Prigel developed, implemented, and managed a comprehensive Assurance Program. He recruited and hired the initial staff of the quality organization including ASME Code qualified and knowledgeable personnel. He was responsible for procedure development and revisions, quality review of Purchase Requisitions/Orders, and processing of Non-Conformance/Corrective Action documents. He was responsible for documenting regulatory compliance, implementation, and coordinating all regulatory visits. Prigel participated in ANSI and ASME code and standard development through the Edison Electric Institute.

1975 – 1978, Senior Quality Assurance Engineer, Washington Public Power

Prigel developed the quality management systems. He was an audit team member and audit team leader for design and construction activities. He led and participated in numerous audits.

1972 – 1975, Field Engineer, Quality Assurance Engineer, Public Service Company of Colorado

Prigel was responsible for the Quality function during the commissioning of this facility. He served as audit team member and audit team leader for numerous audits including fuel audits. He conducted walk-downs of completed plant systems. Prigel participated in ANSI and ASME code and standard development through the Edison Electric Institute.

EDUCATION

B.S. Engineering, Kansas State University

IEEE National Student Scholar

USAF Engineering Scholarship

M.S. Engineering, Kansas State University

AEC Traineeship

Doctorate, Strategic Leadership, Regent University

Clearances

DOE Q (active)