

SUMMARY OF EXPERIENCE

Thirty-seven years Project Engineering/Project Management experience including planning, permitting and licensing, funding, designing, constructing and commissioning projects to support scientific research, nuclear materials production, isotope production, manufacturing, reactor overhaul & refueling, waste management and environmental remediation at both commercial and government facilities. This experience includes project management and engineering, funding authorization, project planning and control, scheduling, building and license code compliance, design, construction management and startup. Project experience includes:

National Enrichment Facility, URENCO-USA
Northwest Medical Isotopes Facility, NWMI
Atlas Pulsed Power Facility, LANL
Nuclear Materials Storage Facility, LANL
Special Nuclear Materials Laboratory, LANL
Weapons Engineering Tritium Facility, LANL
Mixed Waste Disposal Facility, LANL

Sandia ACR Research Reactor Upgrade Project, SNL
SHINE Isotope Production Facility, SHINE
Trident Laser Laboratory Upgrade, LANL
Low Level Waste Compactor, FMPC
Reactor Refueling and Overhaul Support Facilities, KAPL
Shipyard Facilities Modernization, MINS
Waste Characterization Facility, INEL

EDUCATION

M.S. Civil Engineering, University of New Mexico, 1993
Waste Management Minor, DOE Waste & Environmental Research Consortium (WERC) Program, 1991
B.S. Industrial & Management Engineering, Montana State University, 1982

EXPERIENCE

9/19 - **SHINE Medical Isotope Production Facility, Janesville, WI**
Present Project Management/Project Engineering

Fire Protection Engineer: Provided fire protection program support including Fire Hazards Analysis (FHA), Fire Protection Program Plan, Combustible Loading Analysis, Safe Shutdown Analysis and Fire Modeling to meet 10CFR50.48 requirements for this NRC licensed production and utilization facility. Completed cost, scope and schedule baseline for fire protection program and utilized outside design agencies to complete fire suppression and fire alarm designs. Also completed cost, scope and schedule baseline for site security system including vault type rooms, access control system and monitoring systems.

8/18 - 10/18 **Northwest Medical Isotope Production Facility Project, Denver, CO**
Project Management/Project Engineering

Sr. Consultant: Supported cost estimate and proposal to complete final design for this medical isotope production facility to be located at the University of Missouri research park. This NRC Licensed facility will be used for medical isotope production and includes hot cells with remote manipulators for high radiation process chemistry. Also includes final dissolution and purification areas, research and development area, shipping and receiving area and central utilities building. Completed Risk Register to provide basis for cost estimate contingency, Long Lead Procurement (LLP) list, Final Design Discipline Deliverable List and supported summary schedule and cost estimate for this \$100M plus nuclear facility.

05/16 – 9/17 **Navarro Research and Engineering, Inc., Los Alamos, NM**
Project Manager, DOE/NNSA Projects

Project Manager/Nuclear Process Engineer for long range planning effort at Sandia National Laboratory in Albuquerque, NM for substantial upgrade to nuclear facility and research reactor complex. This effort includes supporting Nuclear Facilities and Applied Technologies organization with assessment of shortcomings in existing facilities, new mission capability requirements and other planning issues associated with the development of new projects to allow for the continuation of existing mission and accomplishment of new missions.

12/07- 03/16 **URENCO-USA, Louisiana Energy Services (LES), Eunice, NM**
Project Manager, Construction Department

Project Manager for troubleshooting and startup of Centrifuge Cooling Water System (CCWS), and design and construction of radioactive Liquid Effluent Collection and Treatment System (LECTS) and facility nuclear ventilation system - Gaseous Effluent Ventilation System (GEVS). Duties include developing project requirements with European owner, coordinating design with European vendors, ensuring US codes and standards are met by overseas vendors, developing cost estimate and integrated project schedule, awarding and managing contracts, modifying facility space for system installation, installation and testing of equipment, and overseeing successful startup of operations.

Permitting Project Manager for design and construction of URENCO-USA uranium enrichment facility; responsible for construction permitting, process equipment code compliance (IBC, NEC, NFPA, etc.), inspection and occupancy approval associated with site license agreement. Primary responsibility is to ensure construction permits are obtained as required by New Mexico Administrative Code and that inspections are performed and recorded as required. Position requires extensive schedule coordination with design and construction groups due to phased permitting approach required to support accelerated construction schedule. Provided variances when code of record in license agreement differed from state code and for

equipment which was not Underwriter's Laboratory (UL) listed. Coordinated early occupancy program to allow process equipment installation prior to receipt of occupancy approval. Qualifying as reviewer for 10 CFR 70.72 License Basis changes.

11/91-10/07 **Los Alamos National Laboratory (LANL), Los Alamos, NM**
Project Manager/Construction Project Manager, Project Management Directorate

Complete responsibility for Line Item, General Plant and expense projects from concept to close out. Last assignment was Project Manager of new Radioactive Liquid Waste Treatment Facility Upgrade Project (\$100M). Responsibilities include project and construction management, development of budget submittals and conceptual design documentation, acquisition and management of A-E design services, preparation of risk management, safety basis and environmental documentation, management of design, construction and startup. The total estimated cost for these projects ranges from \$1M to \$100M.

3/90-11/91 **Merrick & Company, Los Alamos, NM**
Project Controls Engineer, Process/Equipment Operations Center, Los Alamos National Laboratory

Provided cost of services estimates, proposal support, Work Plans, Task Management Plans, Conceptual Design Reports, resource loaded schedules and earned value progress reporting to support the efficient execution of DOE production and environmental restoration/waste management projects. These projects included the Idaho National Engineering Laboratory (INEL) Waste Characterization Facility, the LANL Special Nuclear Materials Laboratory and the LANL five year environmental restoration/waste management program. Also prepared proposals for process equipment design, waste management support and petroleum facility remediation/waste management for commercial and industrial sites.

8/88-3/90 **Westinghouse Materials Company of Ohio, Fernald, OH**
Senior Staff Engineer, Construction Department, USDOE Feed Materials Production Center (FMPC)

Responsible for managing capital equipment projects from concept to close-out to support production and environmental remediation at this Department of Energy uranium processing facility. Responsibilities included the preparation and submittal of preliminary project funding and conceptual design documentation. This documentation included project authorization and justification, Environmental Impact Statement (NEPA), Risk Analysis, Project Management Plan and Project Design Criteria.

6/87-4/88 **Texas Instruments (TI), Colorado Springs, CO**
Facilities Planning Engineer, Defense Electronics Division

Supported the production of missile guidance systems through the assessment of existing production capabilities and the generation of capital equipment funding and design packages to improve or modify these capabilities to accommodate increased or modified production runs. Projects included the alteration of clean rooms, installation of automated machining and boring equipment and the upgrade of material handling systems.

6/82-6/87 **U.S. Department of the Navy, Mare Island Naval Shipyard (MINS), Vallejo, CA**
Facilities Engineer, Production Engineering Division

Facilities Project Engineering, Mare Island Naval Shipyard, Vallejo, CA (3/87-6/87)

Supported shipyard production shops in a project engineering capacity. Progressed military construction projects to insure their successful completion. This progressing included equipment installation and procurement, contractor change orders, resolution of technical installation problems with contractor and identification of funding sources. Also provided new project proposals including justification, cost estimate, funding source, environmental impact, economic analysis and labor determination.

Naval Reactor Overhaul and Refueling Program, Knolls Atomic Power Laboratory (KAPL), West Milton, NY (7/84-3/87)

Worked as a shipyard contractor developing and implementing through subcontracts and direct work force, production facility/equipment projects to support the refueling and overhaul of prototype reactors. Also responsible for providing work procedures and procuring material for a six-man maintenance crew and scheduling their efforts to maintain production equipment and general facilities. Supervised one engineering technician. Successfully funded seven new facilities.

Shipyard Modernization Support, Mare Island Naval Shipyard, Vallejo, CA (6/82-7/84)

Worked primarily with electrical/electronics shops using a CAD system to design and generate drawing/specification packages for submarine refueling and overhaul support facilities. Involved in developing overall modernization plan for production and administrative facilities for entire shipyard. Directly responsible for the funding and installation of three new shipyard facilities.

6/81-9/81 **Martin Marietta Aerospace**, Denver, CO
Intern Engineer, Denver Aerospace Division

Assisted foreman and supervisors in final assembly area of this ICBM manufacturer. Learned functions of various production shops and testing techniques used in manufacturing.

TRAINING

- Primavera Scheduling
- Engineering Project Management
- Radiation Worker Qualified
- DOE Project Management

REPRESENTATIVE PAPERS AND ANALYSIS

- Guthrie, Raymond and Price. “Inventory of Potential Mixed Waste Associated with Remediation Activities in the Environmental Restoration Program,” Los Alamos National Laboratory (1996)
- Price. “Removal of Trace Amounts of Plutonium and Americium from Near Neutral pH Waters Using Ion Exchange,” University of New Mexico and Los Alamos National Laboratory (1993)

REGISTRATIONS AND CLEARANCES

Professional Engineering Registrations:

- New Mexico - Environmental and Mechanical Disciplines
- New York - Mechanical Discipline

Certified Project Management Professional, Project Management Institute