

CHRISTOPHER O. GRUBER

EXPERIENCE SUMMARY

- Over 40 years of progressively more responsible experience in all facets of cost engineering, cost management, and project management and control related to the construction, operation and decommissioning of complex capital projects while employed by engineering and consulting organizations.
- Experience with the assessment and evaluation of various projects as well as project management and control processes, capabilities, tools and systems.
- Extensive experience performing independent reviews, independent cost estimates and validations of projects for the U.S. Department of Energy (DOE), the U. S. Army Corps of Engineers and various private sector companies, including several in the utility, chemical and process industries.
- Certified PMI® Project Management Professional 2003-2011 (currently not active).
- Over 30 years experience with commercial nuclear construction, operations and decommissioning projects, as well as projects in progress at all National Nuclear Security Administration (NNSA) sites.
- Over 25 years of relevant experience with DOE/NNSA projects and programs, including project reviews (internal and external), reviews of processes and capabilities, training, preparation of government cost estimates, program planning, project planning and execution as well as policy and guidance development and review.
- Certified Cost Consultant by AACEI 1985-2011 (currently not active).
- Experience in leading/coordinating risk assessments for both DOE/NNSA and commercial owners.
- Knowledgeable user of Crystal Ball® and Pertmaster® software packages for quantitative risk analysis.
- Past Officer and Board Member of AACEI and member of AACEI Decision and Risk Management Committee.
- Key contributor for development of updated DOE Guides for Cost Estimating and Risk Management and lead developer of DOE PMCDP training courses in both areas.
- Excellent written and verbal communication skills with demonstrated ability to present material to senior officials.
- Active DOE Q security clearance.

DETAILED EXPERIENCE

1999 – Present – Independent Project and Cost Management Consultant

- Providing support to contract management team for National Nuclear Security Administration (NNSA) Nuclear Production Contract Cost Savings Program.
- Led development of Life Cycle Cost Handbook for U.S. Department of Energy (DOE) Office of Project and Acquisition Management.
- Lead cost and risk expert for high-visibility external independent reviews of new plans for DOE's Chemical and Metallurgical Research Replacement and Salt Waste Processing Facility projects.

- Key member of independent team responsible for assessing root causes of cost and schedule growth for U.S. Department of Energy Plutonium Disposition Program projects and recommending corrective actions to address the identified issues.
- Provided an assessment of the likely cost of the Mixed Oxide Fuel Fabrication Facility project under various funding scenarios, based on recent baseline change proposal by the project contractor and the U.S. Army Corps of Engineers independent cost estimate.
- Team member for Staff Assistance Visit for Security Improvement Project at Y-12 Plant.
- Completed a management assessment of the Mixed Oxide Fuel Fabrication Facility project for the recently named new Federal Project Director, as recommended by NNSA HQ management.
- Provided independent cost estimating and project management support to U.S. ITER project team.
- Provide U.S. sponsored consulting support to the IAEA related to the development, implementation, application and enhancement of a Safeguards Cost Calculation methodology and system.
- Member of NNSA Peer Review team assessing performance of project and contractor team for the Mixed Oxide Fuel Fabrication Facility project.
- Member of NNSA Peer Review team that assessed Waste Solidification Building Project baseline change proposal.
- Member of ongoing Construction Project Review teams providing DOE oversight/assessments of the Waste Treatment Plant project at Hanford.
- Led development of new DOE Project Management Career Development Program (PMCDP) training courses for both basic and advanced Risk Management as well as Cost and Schedule Estimation.
- Key contributor for development of new/updated DOE Guides for Cost Estimating and Risk Management, including incorporation of GAO Cost Estimating and Assessment Guide best practices into DOE processes.
- Facilitator for Root Cause Analysis workshop focused on DOE Contract and Project Management issues and key contributor to resultant Corrective Action Report provided to GAO.
- Led Independent Cost Estimating (ICE) Team for SaltStone Disposal unit 6 project ICE.
- Team member for External Independent Reviews (EIRs) of various DOE projects, including Office of Science and Environmental Management projects including Waste Treatment Plant at Hanford, Depleted Uranium Hexafluoride projects at Portsmouth and Paducah, and Waste Solidification Building, Salt Waste Processing Facility, and SaltStone Disposal Unit 6 projects at Savannah River Site.
- Member of Independent Project Review (IPR) or Peer Review teams for NNSA (NNSA-APM, NA-54 and predecessor DP organization) reviews of many NNSA projects at all points in project life cycle (CD-0 through project closeout). Projects reviewed included: Mixed Oxide Fuel Fabrication Facility; TRU Waste Facility, Liquid Radioactive Waste Treatment, Cerro Grande Rehabilitation Program and Multi-Channel Communication System projects at LANL; TCR and JCEL projects at SNL; APT shutdown efforts at LANL; SCIF project at LLNL; HEUMF at Y-12; HEU Blend down at SRS; Modern Pit Facility; Office Replacement Project at LANL; Sandia Underground Reactor Facility, Chemical and Metallurgical Research Laboratory Replacement project ; ETCU Project at LLNL; Beryllium Manufacturing and Purification Prototype projects at Y-12 Plan; Terascale Simulation Facility at Lawrence Livermore Laboratory; and many other projects at all NNSA sites.

- Supported reviews of project management and cost estimating capabilities and processes at various NNSA sites.
- Developed project management review and guidance documentation for NNSA, including Project Definition Rating Index and NNSA Cost Estimating Guidance documents.
- Led independent review of Facility Infrastructure Replacement Program (FIRP) at all NNSA sites.
- Provided consulting support to Elimination of Weapons Grade Plutonium Production program.
- Provided risk management and analysis consulting support to Princeton Plasma Physics Laboratory and National Compact Stellerator Experiment Project.
- Reviewed and evaluated risk management program in place for NCLSII project at Brookhaven National Laboratory.
- Supported probabilistic risk analysis used to establish incentive fee structure for closure contracts at DOE Fernald and Mound sites.
- Performed an independent review of the Cost Report for Alternatives presented in the Nuclear Infrastructure Programmatic Environmental Impact Statement.
- Led the cost sub-team and participated in management sub-team for independent reviews of the Richland Spent Nuclear Fuels Project; the WAG-3 and 3100 m3 Projects and the High Level Waste Program at the Idaho National Environmental Engineering Laboratory; the Battelle Columbus Decommissioning Project; the Brookhaven Laboratory Environmental Management Program; the Fernald Environmental Management Project; the Americium/Curium Vitrification Project at Savannah River Site; and the Pantex Environmental Restoration Project at Pantex.
- Supported development and review of project management policy, direction and guidance documentation with emphasis on cost estimating, risk and contingency management and independent project reviews for various DOE elements, including NNSA, OECM and EM.
- Participated on team developing Independent Cost Estimate (ICE) for the decommissioning of the West Valley Demonstration Project.
- Provided an independent review of the proposed cost baseline for the decommissioning of reactors at the Brookhaven National Laboratory.
- Supported or conducted independent estimate and schedule review of several planned refinery upgrade projects, assessment of a proposed cogeneration facility at a refinery, assessment of the performance of a Project Management Contactor on a refinery upgrade project, and an independent project review of three combined cycle power projects being executed by a joint venture between major engineering and construction firms.
- Conducted an assessment of the level of definition of the Umatilla Depot Chemical Agent Disposal Facility using the Construction Industry Institute's Project Definition Rating Index (evaluated state of project definition at time of bidding to support contractor claim preparation).
- Risk management consultant for planned 500 kV transmission line project for electric utility.

1994 – 1999 – Gruber & Flannery

- Managing Partner of Cost Management Consulting Firm
- Developed Government Cost Estimate of prime contractor work scope for Accelerator Production of Tritium (APT) project. Supported intermittent Headquarters reviews of APT project.

- Member of review teams assessing Rapid Reactivation Project and DOE Environmental Restoration program.
- Provided support to DOE's Office of Defense Programs related to independent cost estimates and project reviews and programmatic guidance development. Specific project reviews included Upgrade Canyon Exhaust System Project at Savannah River Site and Nevada Support Facility.
- Served as lead technical manager of joint U.S Army Corps of Engineers and DOE review of all Environmental Management Projects ("Project EM") and also provided staffing of some review teams for effort.
- Developed cost estimating guidance documents for Yucca Mountain Project and entire Radioactive Waste Management Program.
- Provided training and oversight support of new DOE Independent Cost Estimating contractor.
- Conducted independent reviews of nuclear decommissioning plans and activities at Yankee Rowe and Connecticut Yankee plants.

1981 – 1994 & 1974 – 1979 – Gilbert/Commonwealth, Inc., Reading, PA

- Employed by major engineering and consulting firm with annual revenues of over \$200 million and in excess of 1000 employees.
- Project Manager, Independent Cost Estimating Services. Responsible for direction of DOE Independent Cost Estimating (ICE) assignments. Projects included New Production Reactor Program, Civilian Radioactive Waste Management Program, various high energy physics and accelerator projects.
- Led first ICE of DOE Environmental Management Program, supervising and directing approximately 200 subcontractor personnel charged with completing approximately 1600 project cost estimates in 8 weeks and culminating in report to Secretary of Energy.
- Previous positions held: Senior Consultant – Project Controls; Senior Project Controls Engineer; Supervisor of Cost Engineering; Senior Cost Engineer; Cost Engineer; Estimator.
- Projects included many new nuclear power construction projects (U.S. and international), as well as planning for nuclear decommissioning and planning/control of projects executed at operating nuclear plants.

1979 – 1981 – Pathfinder, Inc., Cherry Hill, NJ

- Small project management consulting firm of approximately 30 employees.
- Senior Associate assigned to Exxon Research and Engineering offices.
- Served as ER&E Technical Supervisor (Group Head) responsible for all synthetic fuels research guidance estimating.
- Principal consultant for all cost and schedule consulting services – responsible for recruitment, supervision, guidance/direction, training.

EDUCATION

- M.B.A., Finance, St. Joseph's University, Philadelphia, PA 1986
- B.A., Business Economics, Albright College, Reading, PA 1978 (magna cum laude)