

WILLIAM A. CLOUTIER, Jr.
Manager, Decommissioning

EDUCATION:

Worcester Polytechnic Institute, Worcester, Massachusetts
B.S. Mechanical Engineering

EXPERIENCE:

TLG Services, Inc. (an Entergy Nuclear company)

Decommissioning Planning

Alternative assessment and anticipatory planning for reactor decommissioning. Assist nuclear plant owners and operators in capturing post-shutdown liabilities, planning for the transition from an operating entity, and assessing decommissioning alternatives. Identify and evaluate options for managing decommissioning by-products, site release, and spent fuel management with site disposition.

Project Management and Regulatory Support
1983 - Present

Program Manager for decommissioning assessments, including the evaluation of decommissioning liabilities for both operating and shut down nuclear units. Analyses consider the options available, and provide the licensees/owners of the facilities with both the technical and financial resource requirements associated with site remediation and facility disposition. In addition to supervising the preparation of more than 100 such studies since 1983, major program responsibilities include:

Advanced Reactors: Decommissioning cost and funding assessment for advanced reactor designs. Requirements for decommissioning the reactors were developed along with the labor necessary to manage and perform the tasks identified, and the waste streams produced. The study also included a comparison of decommissioning costs for contemporary reactors and the NRC's funding requirements, with considerations identified for future savings.

Maine Yankee Atomic Power Station: Detailed plan for decontamination and dismantling of the 860 MWe Maine Yankee nuclear unit. Assessment of decommissioning options needed to support the economic evaluations required for a decision to ultimately cease plant operations. On-site appraisal of technical requirements, sufficiently detailed to permit the resulting work product's use in both regulatory proceedings, and as a specification for scoping field activities and evaluating prospective contractors.

Rancho Seco Nuclear Generating Station: Decommissioning engineering and planning support to the Sacramento Municipal Utility District since 1987. Following the permanent closure of the 900 MWe unit in 1989, a comprehensive range of decommissioning alternatives have been identified and evaluated. Feasibility studies included options of accelerated remediation to the long-term entombment of the facility. Decommissioning Plan development and revisions in accordance with strategy transitions.

Big Rock Point: Transition of any earlier decommissioning strategy based upon protective storage and deferred decommissioning to a prompt dismantling plan. Program involved an on-site facility assessment of technical requirements to remediate site. Development of a management plan and organizational strategy for dismantling the 60 MWe unit in the shortest possible time with available resources and with existing waste management constraints.

Trojan Nuclear Plant: Decommissioning planning support to Portland General Electric for decommissioning the 1100 MWe Trojan Nuclear Plant. Program, initiated shortly after the cessation of plant operations, identified and evaluated the utility's decommissioning options. Analyses identified funding requirements based upon actual plant conditions, technical and financial constraints, state and federal requirements, and options available.

Cintichem Reactor and Hot Cell Complex: Decommissioning co-manager during 1992 for the decontamination and dismantling of the radiopharmaceutical facility located in New York State. Supervised on-site engineering, supporting decommissioning operations for the reactor and hot cell complex. Administered the preparation of activity specifications and associated detailed work procedures and safety analyses.

Pathfinder: Assisted Northern States Power Company in the initial planning for decommissioning the Pathfinder Atomic Power Station. Program included an on-site inspection of the facility, and evaluating of removal techniques for the asbestos insulation and one-piece extraction of the reactor vessel. Prepared a detailed feasibility assessment of the activities required to decontaminate the Reactor and Fuel Buildings, as well as the detailed cost analysis which was subsequently submitted to the NRC with the Decommissioning Plan for the unit.

Nuclear Regulatory Commission: Directed a NRC-funded program to compare an agency-sponsored generic decommissioning evaluation for boiling water reactors with a comparable site-specific analysis. Worked with Battelle Pacific Northwest Laboratories in reconciling differences in methodology, scope and pricing structure. Program ultimately resulted in the evolution of a more industry-responsive decommissioning cost estimating tool (generic software program) for use by the NRC.

International:

- Canada: Decommissioning financial planning for the eight unit, Bruce Nuclear Generating Station. Development of the technical basis for estimating the revenue required to place and maintain the CANDU units in protective storage upon the cessation of operations to await future decommissioning. Evaluations and cost modeling performed with consideration of Canadian regulations and validated using TLG's U.S. data base as a benchmark.
- Kazakhstan: IAEA consultant, reviewing the planning and engineering for the decommissioning of the BN-350 fast breeder reactor. ANL consultant on the decommissioning plan for the reactor.
- Japan: Detailed plan and financial assessment for decommissioning the Tokai gas-cooled reactor and surrounding complex.
- Italy: Review of the proposed decontamination and dismantling processes for the Garigliano nuclear unit. Financial assessment.
- South Africa: Evaluation and financial assessment for decommissioning the Koeberg nuclear units and the Pebble Bed Modular Reactor.
- Germany: Assessment of U.S. decommissioning experience for application to the dismantling of the German Obrigheim reactor
- UK: Review and assessment of proposed decommissioning process for the retired Magnox reactors

Nuclear Energy Services, Inc.
Waste Management Engineer
1980 - 1983

Participated in the engineering and planning, feasibility studies and detailed evaluations associated with the assessment of decontamination and dismantling activities, scheduled and anticipated, at both nuclear power and related facilities. Programs included:

Shippingport: Prepared activity specifications, cost/benefit evaluations and provided technical expertise in the support of the decommissioning planning and engineering for the dismantling of the United States' first commercial atomic power station.

Humboldt Bay: Developed a conceptual Decommissioning Plan for this dormant facility. Prepared activation profiles and associated packaging analyses for reactor components. Estimated costs and schedule for dismantling and remediating site.

Western New York Nuclear Service Center: Managed an on-site facility assessment in support of the initial planning for decommissioning of this fuel reprocessing facility.

Identified design criteria for the high-level waste vitrification process hardware needed to handle residual inventories in storage.

EBASCO Services
Lead Radwaste Engineer
1977 - 1980

Lead Radwaste Engineer, Chemical Engineering Group, overseeing the engineering and development, and hardware procurement of radioactive waste processing and treatment systems in support of the construction of the Washington Public Power Supply System's Nuclear Units 3 and 5. Supervised bid specification preparation, vendor evaluation, and coordinated vendor interface through site acceptance and hardware installation.

EXPERT TESTIMONY:

Regulatory support for nuclear utilities on decommissioning funding in state and federal dockets. Preparation of expert testimony, briefs, rebuttal, and responses to discovery and witness cross

Testified: September 2011, before the New Hampshire Nuclear Decommissioning Financing Committee, for NextEra Energy Seabrook on the decommissioning cost for Seabrook Station and cost escalation, NDFC 2011-1

Testified: October 2009, before the New Hampshire Nuclear Decommissioning Financing Committee, for FPL Energy Seabrook on the decommissioning cost for Seabrook Station and cost escalation, NDFC 2009-1

Testified: May 2009, before the Vermont Public Service Board, for Entergy Nuclear Vermont Yankee, on decommissioning issues related to license renewal at Vermont Yankee, Docket No. 7440

Testified: December 2008, before the Public Utility Commission of Texas on behalf of Entergy Gulf States on decommissioning issues and costs for the River Bend Station, Docket No. 34800

Testified: September 2007, before the New Hampshire Nuclear Decommissioning Financing Committee, for FPL Energy Seabrook on the decommissioning cost for Seabrook Station, NDFC 2007-1

Testified: February 2006, before the Vermont Public Service Board, for Entergy Nuclear Vermont Yankee, on decommissioning issues related to financial assurance for spent nuclear fuel management at Vermont Yankee, Docket No. 7082

Testified: April 2002, before the Vermont Public Service Board, for Vermont Yankee

Nuclear Power Corporation, on decommissioning costs and the cost for Vermont Yankee, Docket No. 6545

Testified: June 2000, before the Vermont Public Service Board, for Vermont Yankee Nuclear Power Corporation, on decommissioning costs and the cost for Vermont Yankee, Docket No. 6300

Testified: September 1998, before the Arkansas Public Service Commission, for Entergy Arkansas, Inc. on decommissioning alternatives and cost for ANO-1, Docket No. 87-166-TF

Testified: August 1993, before the New Hampshire Nuclear Decommissioning Financing Committee, for New Hampshire Yankee on the decommissioning cost estimating methodology, NDFC 93-1

Testified: September 1991, before the New Hampshire Nuclear Decommissioning Financing Committee, for New Hampshire Yankee on the decommissioning projections for the Seabrook Station, NDFC 91-1

Testified: August 1989, before the North Carolina Utilities Commission, for Duke Power Company, Carolina Power & Light, and Virginia Power Company on decommissioning costs and waste volumes for decommissioning the Catawba Nuclear Station and Brunswick Steam Electric Plant, Docket E-100, Sub 56

PUBLICATIONS and PRESENTATIONS:

“Decommissioning: Preparing for the End Game,” presentation to Mellon Trust University, June 2007

“Decommissioning Issues: Is Past Experience Indicative?” presentation to Mellon Trust University, June 2004

“Decommissioning Issues: Is Past Experience Indicative?” presentation to the Nuclear Non-Operating Owner’s Group, March 2004

Contributing author, “The Decommissioning Handbook,” ASME, New York, 2004

“Decommissioning Liabilities and Cost Considerations,” ICEM '03, International Conference on Radioactive Waste Management and Environmental Remediation, Oxford, UK, 2003

“Decommissioning Liabilities and Cost Considerations,” presented at the Decommissioning Costs, Decommissioning Funds and the Cleanup Criteria Workshop, Waste Management Conference, February 2002

“Commercial Decommissioning Programmes in the US,” and “Decommissioning Progress in US DOE Facilities,” Residential Summer School, Christ’s College, Cambridge, U.K., 1999

"Accelerated Decommissioning with Limited Funding," presented at TLG Services' 1996 Decommissioning Conference, October 1996

“Decommissioning in The United States,” presented at the International Seminar, New Generation Nuclear Power Plants, Warsaw, Poland, September 25-27, 1996

“Decommissioning; Spiraling Costs, Limited Options,” with J.A. Carlson, presented at the 1995 ANS Annual Meeting

Contributing author, "Planning and Management for the Decommissioning of Research Reactors and Other Small Nuclear Facilities", U.S. consultant and contributor, IAEA Technical Report Series No. 351, 1993

"Site-Specific Decommissioning Cost Estimating," presented at TLG Services' 1992 Decommissioning Conference, October 1992

"Impediments to Nuclear Decommissioning Due to the Presence of Spent Fuel On-Site," with F.W. Seymore, presented at the ASTM Las Vegas meeting, January 1990

"Influence of Decommissioning on Radioactive Waste Stream," with J.J. Adler and F.W. Seymore, presented at the 1988 ANS Topical Conference: Radiological Effects on the Environment Due to Electrical Generation, July 1988

"Decommissioning of Commercial Power Reactors: Rationale, Impetus, Execution and Consequence," with F.W. Seymore, presented at the Low Level Waste Forum, January 1988

AIF/NESP-036, "Guidelines for Producing Commercial Nuclear Power Plant Decommissioning Cost Estimates," with Thomas S. LaGuardia et al, May 1986

COMMITTEES:

OECD/NEA Co-operative Programme on Decommissioning of Nuclear Facilities, Task Group Member on Decommissioning Costs

Nuclear Engineering Technology Advisory Committee for the Three River Community College

OTHER:

- American Nuclear Society (member)