THOMAS C. GUNDERSON, PH.D., P.E.

EXECUTIVE PROFILE

Dr. Gunderson has over 40 years of experience in environmental management (environmental chemistry; environmental compliance; environmental monitoring; environmental restoration; radiological and hazardous waste management), system engineering (conceptual design documents, construction documents, equipment specifications, Department of Energy line item process), facility operations (formality of operations, integrated safety management, quality assurance), operational readiness preparation, strategic planning, project/program management (scope development, alternatives analysis, scheduling, cost development, risk management), safety programs, and mission assurance. He has held senior technical and management positions at the Los Alamos National Laboratory (LANL), ranging from Division Leader of the Environmental Management Division to Program Manager in Integrated Nuclear Planning to Program Manager for the TA-55 Reinvestment Project (TRP) III.

DETAILED EXPERIENCE

Consultant – Longenecker & Associates, LLC

March 2018-Present

Provide consultations for mission assurance, quality management and environmental management.

Led due diligence review of LANL's Environment, Safety, and Health Program for Triad National Security Transition Team. Reviewed functional areas included Nuclear Criticality Safety, Radiation Protection, Explosives Safety, Accelerator Safety, Waste Management, Pressure Safety, Asbestos Program, Beryllium Program, and Worker Safety & Health Program (10 CFR 851) with particular emphasis on Electrical Safety, Integrated Safety Management System, and Nuclear Safety. Point of Contact for Emergency Operations Readiness.

Evaluated and made recommendation for a commercial off-the-shelf (COTS) Contractor Assurance System (CAS) software suite for N3B, the Los Alamos Cleanup Contractor. This task included assembling, summarizing and documenting the key attributes of a CAS software tool that would best serve N3B; evaluating COTS tools and current tools in use at facilities, such as LANL, Sandia, NNSS, LLNL and commercial nuclear power plants; and developing a notional implementation schedule.

Consultant – Edgewater Technical Associates, LLC

August 2017-March 2018

Reviewed assessment reports, conducted basic analysis, and generated an assessment results database of all external and internal assessments conducted at the Los Alamos National Laboratory. Analyzed commonality of findings.

Generated a matrix of Safety Management Programs, key facilities, and other assessment criteria with frequency of assessment mapped. Identified repeated issues in a summary report, along with recommendations based on apparent risk per area assessed.

Consultant – Technology Management Consulting Services, Inc.

July 2016-July 2017

Led environmental compliance functional area for facility evaluation of radioactive waste treatment and storage areas at the Los Alamos National Laboratory.

R&D Engineer 4, Los Alamos National Laboratory – Manufacturing Quality (MQ)

June 2013-November 2014

Managed Resumption and Readiness efforts in the Plutonium Facility (PF-4) for weapons quality inspection program. This work entailed drafting Criticality Safety Postings, Detailed Operating Procedures, Integrated Work Documents, and related documentation. Led preparations for Management Self-Assessment of Foundry Operations related to PF-4 Readiness. Responsible for generating weapons inspection metrics data. Authored security plan for demonstrating secure wireless (Wi-Fi) technology.

Program Manager, Los Alamos National Laboratory – Pit Integrated Technologies 2 (MET-2)

January 2012-June 2013

Responsible for coordinating PFITS/CARS corrective actions, Manufacturing Administrative Procedures (MAPs), weapons metrics, and cost reduction documentation for the Manufacturing Engineering and Technology (MET) Division. Prepared a risk assessment of the pit surveillance program, which consists of more than 50 unit operations (high frequency ultrasonic testing, high energy radiography, tube crimping, etc.).

Program Manager, Los Alamos National Laboratory – Nuclear Process Infrastructure 8 (Equipment Installation)

December 2010-December 2011

Program Manager for TA55 (Plutonium Facility) Reinvestment Project III, a $100+ million construction project involving the installation of a fire alarm and suppression system and ventilation system upgrade in a plutonium facility. Responsible for acquisition strategy, staffing, earned value system reporting, and other project management tasks. Responsible for business process improvement and managing four project managers.

Program Manager, Los Alamos National Laboratory – Integrated Nuclear Planning Project

May 2007-November 2010

Coordinated and managed issues related to Infrastructure & Capital Project Execution at the Plutonium Facility (TA-55) through the Integrated Nuclear Planning Project. This role included sponsorship of project personnel for access requirements, facility space management, and direct management of infrastructure interfaces such as security, roads, utilities, and parking. A critical function of this part of the organization was the interface between programs/projects and the TA-55 facility operations organization.

Ninety percent of my time assigned as a Project Engineer on the TA-55 Reinvestment Project (August 2009-Present). Responsible for subprojects on Instrumentation and Criticality Alarm System; all Requests for Information (RFIs); drafted Functional and Operational Requirements for Confinement Doors subproject; chair Design Review Record (DRR) meetings on various subprojects with TA-55 Subject Matter Experts.

Interface Project Leader, Los Alamos National Laboratory – Chemistry and Metallurgy Research Replacement Project

December 2005-May 2007

Participated as a member of the project management team that was responsible for this $850 million, 10-year construction project. Supervised staff in the Project Office and set priorities for Project Office staff (Training Coordinator, Document Administrator) to ensure that work was prioritized to meet changing requirements. Interacted with National Nuclear Security Administration (NNSA) officials and those of other federal (e.g., Congressional Offices, Environmental Protection Agency) and state (e.g., New Mexico Environment Department) agencies on a broad range of funding and project issues. Ensured adequate project communication with Los Alamos National Laboratory's (LANL's) Public Affairs Office regarding project developments. Responsible for coordinating the development of presentations by the Project Director. Represented the Project Director at a variety of meeting and assures appropriate actions are taken as a follow-up. Facilitated strategic planning for the Project Director, including development of prioritized agendas, objectives, proposed policies, and preparations. Coordinated project reviews.

Project Leader to Laboratory Counsel, Los Alamos National Laboratory – Office of the Laboratory Counsel

July 2002-December 2005

Worked extensively with Covington & Burling law firm and the Congressional Subcommittee on Oversight & Investigations relating to investigation of allegations of management irregularities and poor business practices at the Los Alamos National Laboratory (LANL). Prepared a well-received White Paper for
New Director Nanos summarizing the legal risks and vulnerabilities facing LANL. Assisted in investigation of the "Lillian Anaya/Mustang Case." Authored an extensive resource paper on indemnity under the Prime Contract authorized by Public Law 85-804, the Price Anderson Act (as amended), and the Safety Act.

Special Assistant to Principal Deputy Laboratory Director, Los Alamos National Laboratory – Director's Office

October 2001-July 2002

Point-of-Contact for PDLD with the Office of the Inspector General for Walp/Duran investigations. Liaison with numerous local, state and Washington officials. Helped develop performance indices for LANL senior managers. LANL representative to the University's Tri-Lab (SNL, LLNL, LANL) Committee for Streamlining Security Policies and Procedures (Final report of the Tri-lab Committee for Streamlining Policies and Procedures" published November 8, 2002.)

Special Assistant to the Deputy Laboratory Director for Operation, Los Alamos National Laboratory – Director's Office

1999-2001

Assisted the Deputy Laboratory Director for Operations (DLDOPS) at LANL with LANL operational activities. These included environmental programs (coordinated interactions with the New Mexico Environment Department; helped negotiate Compliance Order settlements; monitored and recommended solutions for environmental issues as LANL' s "Safety Function Manager for the Environment;" manage $1.5 million annual special environmental projects program), security (allocate Q/L security clearances for LANL), personnel matters (review and recommend personnel actions to the DLDOPS; manage the SIA process, promotional funds, merit funds), and facilities (DLDOPS point-of-contact for Cerro Grande Rehabilitation Project; "Federal Manager for Active Facilities"). Also, I was the point-of-contact for Los Alamos County for

operational issues, administratively manage the 30+ institutional safety committees, and was a mentor in LANL's mentor program.

Integrated Safety Management, Los Alamos National Laboratory – Director's Office

1998-1999

Designed and implemented a process to address and remedy 25 of the most serious environmental issues facing LANL. Worked with senior DOE managers to design and implement the verification process to verify Sandia National Laboratory's ISM Program.

Program Manager — Environment, Safety, and Health (ESH) Division, Los Alamos National Laboratory

1993-1998

Developed and implemented strategic/tactical and business plans; reengineering service delivery and resource management processes for ESH Division at LANL. ESH Division is responsible for radiation protection, occupational medicine, industrial hygiene, industrial safety, environmental regulatory compliance, nuclear criticality, and related ESH functions; the Division has 800 employees and a $60 M/year budget.

- Initiated cost-risk-benefit prioritization to insure limited resources deployed most effectively.
- Installed project controls to monitor and control Division's work.
- Reengineered ESH service delivery processes.

Division Leader — Environmental Management Division, Los Alamos National Laboratory

1991-1993

Managed more than 300 professionals and $160 M/year at LANL for hazardous waste operations/minimization; environmental monitoring and compliance (RCRA/HSWA, CERCLA/SARA, TSCA, NEPA, etc.); analytical chemistry; environmental restoration.

- Managed rapid growth from $80 M/year to over $160 M/year over 2 years and going from 170 to 300 full time employees by implementing strong project controls and hiring talented professionals.
- Initiated customer survey and benchmarking; used results to improve Division's service.
- Initiated ESH audits, including program evaluations and field inspections.
- Developed staffing, space, and other business plans.
- Established Technical Advisory Committee of industry/academic leaders to assist in directing Environmental Management's future programs.

Deputy Division Leader — ESH Division, Los Alamos National Laboratory

1987-1991

Managed 200 professional staff and $80 M/year for environmental programs; industrial hygiene; occupational medicine.

- Represented LANL during all Environmental Protection Agency and New Mexico inspections.
- Presented environmental programs at LANL in numerous public forums.
- Member on LANL emergency response team for hazardous and radiological emergencies.

Group Leader — Environmental Surveillance, Los Alamos National Laboratory

1985-1987

Lead 50 staff responsible for environmental monitoring and compliance programs funded at $8.0 M/year.

- Revamped annual environmental surveillance report into reader-friendly document.
- Effectively interacted with print/electronic media on environmental issues.
- Obtained RCRA operating permit for LANL.

Staff Member — Environmental Surveillance, Los Alamos National Laboratory

1975-1984

Managed 15 staff for environmental monitoring program.

- Directed environmental field operations on decontamination and decommissioning projects.
- Created computer programs and graphics to manage and statistically analyze water, air, soil, and sediment data.
- Authored numerous technical papers and reports.

Research Assistant — University of Florida

1973-1975

Teaching and research responsibilities in air pollution instrumentation and control; aerosols; meteorology.

- Taught environmental engineering course to undergraduates emphasizing aerosol science.
- Built high-temperature system to test filters.

Civil Engineer — Daniel Construction Company

1972-1973

In Puerto Rico, responsible for rental of construction equipment; conduct field inspections; cost estimates.

- Saved Company $50,000 by developing system to track rental equipment.
- Prepared cost estimates from design specifications.

EDUCATION

University of Florida
Ph.D. Environmental Engineering

California Institute of Technology
M.S. Civil Engineering

University of Wisconsin
B.S. Mechanical Engineering

State of New Mexico
Professional Engineer (1978) No. 6670 in New Mexico.

Project Management Professional
No. 529404 (2010) - Inactive.

CLEARANCE STATUS

Formerly held “Q” clearance and was in the Human Reliability Program (HRP)

DERIVATIVE CLASSIFIER

Former Derivative Classifier at Los Alamos National Laboratory

PUBLICATIONS

"Evaluation of Contractor Assurance System Software Tools," Thomas C. Gunderson and Gary MacDonald, July, 2018.

"Security Plan for RLUOB Secure Wireless Communication Demonstration," Gunderson, Thomas C., LA-CP-14-20183, 2014.

"Candidate Projects for TA-55 Reinvestment Project (TRP) III Scope," Gordon, Derek; Gunderson, Thomas C., LA-UR-11-01666, 2011.

"TA-55 Reinvestment Project (TRP) I, II, and III," Gunderson, Thomas C., LA-UR-10- 02894, 2010.

"Alternatives to Parking at TA-55," Gunderson, Thomas C., LA-UR-10-00740, 2010.

"TA-55 Reinvestment Project (TRP) II Independent Project Review," Gunderson, Thomas C., LA-UR-09-03742, 2009.

"Coordination of Projects Impacting ADSMS Manufacturing Operations through LANL's Integrated Nuclear Planning Process," Gunderson, Thomas C., LA-UR-08-01869, 2008.

"CMRR Glovebox Vendor Analysis Report Revision B for LANL and DMJMH&N," Gunderson, Thomas C., LA-CP-07-0077, 2007.

"Los Alamos National Laboratory Environment, Safety, and Health Management Plan for FY 1999-2003, Budget Formulation Information," Gunderson, Thomas C., LA-UR-97- 1015, 1997.

"Environment, Safety, and Health Management Plan for Fiscal Year 1998-2002, Budget Formulation Information," Gunderson, Thomas C., LA-UR-96-0910, 1996.

"Environmental Monitoring at Los Alamos National Laboratory," Gunderson, Thomas C., LA-UR-96-0558, 1996.

"Environmental, Safety, and Health (ESH) Division Program Management System," Gunderson, Thomas C., LA-UR-95-2314, 1995.

"Overview of the Los Alamos National Laboratory Environment, Safety, and Health Management for FY 1997-2001," Gunderson, Thomas C., LA-UR-95-0765, 1995.

"Cost-Benefit of Compliance at the Los Alamos National Laboratory," Anderson, Robert G.; Gunderson, Thomas C., LA-UR-94-4240, 1994.

"Los Alamos National Laboratory, Environmental Management; A Department of Energy Environmental Program Environmental Restoration and Waste Management Five Year Plan, Site Specific Plan," Gunderson, Thomas C., LA-UR-92-2323, 1992.

"LANL Environmental Restoration Assessment and Remediation Technology Development Program," Ettinger, Harry J.; Aamodt, Paul L.; Gunderson, Thomas C.; Leasure, Craig S.; Vocke, Robert W.; et al., LA-UR-91-3297, 1991.

"Environmental Restoration and Waste Management Five-Year Plan Site-Specific Plan (July1991)," Gunderson, Thomas C., LA-UR-91-2388, 1991.

"Environmental Restoration and Waste Management Five-Year Plan Site Specific Plan," Gunderson, Thomas C., LA-UR-91-1710, 1991.

"Quality Assurance Project Plan," Gunderson, Thomas C., LA-UR-87-1076, 1987. "Safety Manual," Gunderson, Thomas C., LA-UR-87-1075, 1987.
"Comprehensive Environmental Assessment and Response Program," Gunderson, Thomas C., LA-UR-86-0502, 1986.

"Radiological Survey Following Decontamination Activities Near the TA-45 Site," Gunderson, Thomas C.; Buhl, Thomas E.; Romero, Richard; Salazar, John, LA-09831- MS, 1983.

"Environmental Study of Emissions from Testing of Shaped - Charge, Depleted Uranium Munitions,; Gunderson, Thomas C.; Buhl, Thomas E.; Romero, Richard; Van Etten, Don M., LA-UR-83-0373,1983.

"Supplementary Documentation for An Environmental Impact Statement Regarding the Pantex Plant - Radiation Monitoring and Radiological Assessment of Routine Releases," Buhl, Thomas E.; Dewart, Jean M.; Gunderson, Thomas C.; Talley, Daniel A.; Wenzel, Walter J.; et al., LA-09445-PNTX-C, 1982.

"Environmental Surveillance at Los Alamos During 1980," Gunderson, Thomas C., LA- 08810-ENV, 1981.

"Quality Assurance for Environmental Analytical Chemistry - 1976-1979," Gladney, E. S.; Owens, James W.; Gunderson, Thomas C.; Goode, William E., LA-08730-MS, 1981.

"Environmental and Emergency Response Capabilities of Los Alamos Scientific Laboratory's Radiological Air Sampling Program," Gunderson, Thomas C., LA-08379- MS, 1980.

"Removal of a Contaminated Industrial Waste Line at Los Alamos, New Mexico," Gunderson, Thomas C., LA-UR-79-0413, 1979.

"Environmental Sampling Program for A Solar Evaporation Pond for Liquid Radioactive Wastes," Romero, Richard; Gunderson, Thomas C.; Talley, Daniel A., LA-08177, 1979.

"Filtration Characteristics of Glass Fiber Filters at Ambient and elevated Temperatures," Thomas C. Gunderson, Dissertation, University of Florida, 1975.

"Efficiency and Loading Characteristics of EPA's High-Temperature Quartz Fiber Filter Media," Dale A. Lundgren and Thomas C. Gunderson, American Industrial Hygiene Association Journal, Vol. 36, pp. 866-872, December, 1975.