

**DSC - 6**  
**Professional Resume of**  
**THOMAS E. LINDEMUTH, P.E.**  
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**SUMMARY**

A recognized professional with over 45 years of experience as a scientist, teacher, and leader in many professional areas. Having recently retired from full time employment, I am finding opportunities where my skills and experience are of value to our community, to our nation as a whole, and to the environment. Currently, I am the President of the Board of the Delta Science Center at Big Break. Until June of 08, I taught science at the secondary level. I also worked with colleagues as a teacher/leader to develop curriculum and classroom activities. Prior to becoming a teacher, I had a strong record of building and managing effective teams in the environmental industry, developing of new waste management process equipment and systems. I advised private and government clients on water supply and energy issues, hazardous waste, waste water treatment and disposal, and industrial risk management. I developed and managed projects ranges from very small feasibility studies to large (over \$5mm) contracts for government agencies.

## ***Current Activities and Interests***

### **Environmental Scientist and Advocate**

Working with the Delta Science Center at Big Break and Friends of Marsh Creek Watershed, I have been organizing, training and leading evaluation of the water and environmental quality in the Delta and in Marsh Creek. These activities have included sampling and analysis method development, teacher mentoring, data gathering and review, and public presentations. These activities have been substantially expanded, focusing on the impact of high nutrient concentration levels in Delta waters. This work has brought in volunteers from area colleges and high schools as well as interested and qualified adults.

### **Teaching**

Starting in the autumn of 1997, I was employed as a high school classroom teacher. I taught Chemistry, Physics, Mathematics and Environmental Science at Freedom High School in Oakley, California. At Freedom, I served as Science Department Chair and science curriculum leader. I also participated with a team of teachers and administrators who prepared the curriculum strategy document for the Environmental Academy at Heritage High School in Brentwood. I believe strongly that success for students in the science classroom depends on the student's ability and motivation as an independent learner along with the presence of a fully qualified teacher. My activities in and out of the classroom support that belief. In particular, for over seven years my students actively were involved in water quality and environmental monitoring of Marsh Creek and the waters adjacent to the Delta Science Center. The students learned and demonstrated skills in water and invertebrate sampling, water analysis, and data quality control. Findings from these field studies helped local community leaders to adopt more effective street cleaning procedures and to agree to seek help to incorporate parts of Marsh Creek into Creekside Park in Oakley, CA. Some of these students have gone on to continue these studies at the university level.

As a teacher, I constantly strove to improve the achievement of my students through use of focused study techniques, guided inquiry in the field and laboratory, and expression of their ideas and findings in neat and compelling reports and presentations. The classroom techniques I used in my classroom and help other faculty to use are based upon sound research.

### **Consulting**

Prior to becoming a teacher, I was the principal of Lindemuth Engineering. The consultancy specialized in high quality services to business, government entities and industry in the areas of hazardous waste site investigation and restoration, facility permitting and regulatory liaison, waste management and minimization, and industrial water and waste water treatment. I also worked for several other companies in the area of environmental assessment and remediation. Projects included preliminary site investigations, waste management and minimization, remedial investigations, health risk assessments, feasibility studies and remedial design, permitting, construction and operation. I am familiar with the intricacies of government contracting, project management and technical procedures. This includes expertise in planning and management of complex, multi-disciplinary projects, including use of computerized CPM techniques. I acted as the facilitator for new business

opportunities and project formation. I am computer literate with a wide variety of scientific, project management, word processing, spreadsheet and presentation software. In addition to my consulting activities, I represented the Environmental Engineering profession on the Contra Costa County Hazardous Materials Commission for a period of six years. This volunteer body advises the County Board of Supervisors on a wide range of issues relating to hazardous materials, community and worker safety and land use. As part of these efforts, I directed a multi-constituency team which developed a first-of-a-kind risk based ordinance governing land use for facilities that handle hazardous materials or hazardous waste. This team also worked on the issues of residential encroachment on industry and guidelines for facility closure in the county.

## **Engineering**

Earlier in my career, I led programs examining the technical, environmental and financial feasibility of numerous technologies. This included employment at an electric power utility, several companies that manufacture equipment and systems for water and waste treatment, and one of the world's largest engineering firms.

The following is a partial list of my achievements over my entire career.

- Led students on field investigations of water quality in the Marsh Creek watershed
- Developed and taught the first Environmental Science course in our school district
- Helped develop and implement system for tracking student grades and progress against standards using the same data entry
- Managed the investigation, design and implementation of remedial programs, including site investigation, feasibility study, remedial action plan, design, construction and operation of over two dozen major (up to \$1 million) and hundreds of smaller projects.
- Managed the development and implementation of regulatory compliance programs for several industrial clients and their legal counsel resulting in cost savings (reduced or eliminated fines) of over \$5,000 per day.
- Formed and managed multi-million dollar projects from DOE for geothermal resource exploration and development.
- Developed the environmental control strategy for a large coal gasification for Shanghai, China.
- Provided expert testimony or litigation support for six clients.
- Managed or was principal investigator on technology development and demonstration projects including production of synthetic fuel from coal, and seawater desalination projects worldwide.
- Managed landmark DOE demonstration project for production of oil from biomass.
- Was principal inventor or developer for marine oil/water separators, compact steam generators, evaporators for treating industrial wastes, and radioactive wastewater concentrators.
- Developed and implemented more sensitive and reliable instrumentation for protecting high-pressure steam generators from corrosion and fouling

## **PROFESSIONAL HISTORY**

Currently	Board President, Delta Science Center at Big Break
2000 - 2008	Science Teacher, Freedom High School
1998 – 2000	Science Teacher, John Swett High School
1996 – 1998	Principal, Lindemuth Engineering
1993 - 1995	Western Regional Manager, Hydro-Environmental Technologies
1991 - 1993	Associate, The MARK Group, Inc.
1989 - 1991	Hazardous Waste Remediation Group Manager, Kleinfelder, Inc.
1988 - 1989	Central Engineering Group Manager, Applied GeoSystems, Inc.
1987 - 1988	Owner, T.E.L. Enterprises
1974 - 1987	Senior Engineer/Project Manager, Bechtel Group, Inc.
1972 - 1974	Marketing Manager, Riley Beaird, Inc.
1968 - 1972	Development Engineer, Aqua-Chem, Inc.
1963 – 1968	Operations Engineer, Wisconsin Electric Company

**EDUCATION**    Single-Subject Teaching Credential, Chapman University, Concord, California  
Additional studies to support teaching, Diablo Valley College, University of San Diego, Stanford University  
B.S., Chemical Engineering, University of Wisconsin, Madison  
Mechanical Engineering, Marquette University, Milwaukee, Wisconsin,  
Business Management, Golden Gate University, San Francisco, California  
Hazardous Waste Management, University of California, Berkeley

**REGISTRATION**    Chemical Engineering - California, No. 3580

Thomas E. Lindemuth, P.E.  
List of Publications

Lehner, K.L. & Lindemuth, T.E., "Volatile Carryover of Complex Sodium-Aluminum-Silica Salts in High Pressure Boilers", Transactions of the Edison Electric Institute Chemistry Subcommittee, September, 1966.

Lindemuth, T.E., "Sub-Microgram/Liter Analysis for Alkali Metals in Process Water Using Radiation Shielded Flame Emission Spectroscopy", Trans. ACS, 1967

Hantsch, R.A. & Lindemuth, T.E., "Continuous Monitoring and Control of Phosphate and Silica in Sub-Critical Pressure Boiler Water", Transactions of the Edison Electric Institute Chemistry Subcommittee, May. 1967

Hartenstein, L.L. & Lindemuth, T.E., "Pilot Testing of Simultaneous Removal of Sulfur Dioxide and Fly Ash from Flue Gas Using a Turbulent Contact Absorber", Transactions of the Edison Electric Institute Chemistry Subcommittee, September, 1965

Lindemuth, T.E. & Goeldner, R.A., "High Efficiency Removal of Oil from Ship Bilge & Ballast Water, Journal of Society of American Military Engineers, June 1970

Lindemuth, T.E., "Large Capacity Sea-Going Oil Spill Cleanup System" for U.S. Coast Guard, September, 1970

Lindemuth, T.E., "Results of Pilot Studies, Removal of Oil from Tanker Ballast Water" for U.S. Department of Commerce, Maritime Commission, June, 1971

Lindemuth, T.E., Patent Application, "Removal of Oil from Water Using Pleated Coalescing Media", 1968

Lindemuth, T.E., "Recovery of Protein By-Products from Spent Grain Liquor by Multiple Effect Evaporation" for Jos. Schlitz Brewing Company, April, 1970

Awerbuch, L.A. & Lindemuth, T.E., "Simultaneous Recovery of Sulfur and Energy from Spent Sulfite Pulping Liquor" for Scott Paper Company, Philadelphia, Pa., March, 1971

Lindemuth, T.E., "Energy Self-Sufficient Treatment of Spent Grounds and Press Water from Coffee Production" for Nestle Company, Freehold, NJ. May. 1971

Gilbert, F.J. & Lindemuth, T.E., "Remote Production of Distillate Fuel from Crude Oil Using Multiple Effect Distillation" for U.S. Energy Research and Development Administration, December, 1973

Lindemuth, T.E., "Conceptual Design of Water Supply for Jubail Industrial City Using Multi-Stage Flash Desalination" for Kingdom of Saudi Arabia", for the Joint Commission for Jubail and Yanbu, March 1975

Awerbuch, L.A. & Lindemuth, T.E. "A New Look at Dual Purpose Plan Design", presented at the International Desalting Conference, Ponce, Puerto Rico, April, 1975

Lindemuth, T.E. & Schoepflin, F.J., " Scale Control in Geothermal Fluid Handling", presented at Geothermal Resources Council Annual Meeting, Holtville, CA, October, 1975

Ergun, S.A. & Lindemuth, T.E., "Feasibility of Producing Oil from Municipal Solid Waste Using the P.E.R.C. Process", for U.S. Energy Research and Development Administration, May, 1976

Lindemuth, T.E. "Desalination of Geothermal Brines", presented at the International Desalting Conference, Mexico City, October, 1976

Ergun, S.A., Houle, E.J. & Lindemuth, T.E., "Experimental Program for Biomass Liquefaction Pilot Program, Albany Oregon, 1977, for U.S. Department of Energy, February, 1977

Awerbuch, L.A., Lindemuth, T.E., May, S.C., Rogers, A.N., "Direct Contact Process for Production of Power & Water from Geothermal Brines", presented at the International Desalting Conference, San Diego, October, 1977

Lindemuth, T.E.. "Biomass Liquefaction at Albany, Oregon" Presented at American Chemical Society Annual Meeting, Anaheim, Ca, September, 1977

Lindemuth, T.E. & Van Der Mast, V.C., "Liquefaction of Cellulosic Materials at the Albany, Oregon Experimental Facility", Report of Investigations under U.S. Department of Energy Contract EG-77-C-03-1338, November, 1977

Lindemuth, T.E. & Van Der Mast, V.C., "Biomass Liquefaction Program, Experimental Investigations At Albany. Oregon, Second Annual Symposium on Fuels from Biomass, U.S. DOE, June 1978

Lindemuth, T.E., May, V.C., Van Der Mast, V.C., "Conceptual Design of Large Capacity Desalination Plants" for Saline Water Conversion Corporation, Saudi Arabia, September, 1979

Chen, T.P. & Lindemuth, T.E., "Prefeasibility Study of Producing Electric Power by Coal Gasification/Combined Cycle Generation in New England", for EG&G, November, 1979

Booras, G.B., Chen, T.P. & Lindemuth, T.E., "Louisiana Gasification Project, Feasibility of Producing Synthesis Gas in Baton Rouge, La", for the Louisiana Gasification Associates, October, 1980

Booras, G.B., Chen, T.P. & Lindemuth, T.E., "Feasibility of Producing Fuel and Feedstock from Coal" for E.I. DuPont de Nemours and Houston Lighting & Power, September, 1981

Lindemuth, T.E., "Geothermal Deep Drilling Project, 1st Annual Report of Investigations", for U.S. DOE, June, 1982

Patent Disclosure, Lindemuth, T.E., & Rickard, D.M.."System for Extraction and Recovery of Volatile Contaminants from Soil", February, 1989

Burr, W.A., & Lindemuth, T.E., "Feasibility of Extracting and Recovering Diesel Fuel from Soil at Former San Jose Bulk Terminal" for Unocal Marketing Division, February, 1990

Lindemuth, T.E., "Cost Effective Site Restoration" presented to the Contra Costa County Bar Association, October, 1994

Lindemuth, T.E., & Solomon, H.S., "Minimizing Risk and Cost in Environmental Site Restoration" Presented before the National Environmental Claims Managers Association, November, 1994