TERRENCE J. PITZEN
7563 Convoy Court
San Diego, CA 92111
(v) 858-874-5577
(f) 858-874-8239
terry@chemical-safety.com

RESUME

Summary of Professional Skills:

I have a skill set in developing and implementing safety, health and environmental affairs plans and programs based on 33 years of experience both in the regulatory and industrial areas in chemical plants and laboratories.

Chemical Consultant
recent projects

Developed experience in designing Hazardous Materials Management Business Plans, Illness and Injury Prevention Plans, Storm Water Pollution Prevention Plans, Hazardous Waste Management Plans, Toxic Release Inventory reports, and numerous other regulatory plans and reports for a wide variety of clients in the chemical industry while working as a consultant to Advanced Chemical Safety, Inc.

- Provided litigation support in the form of library research on industrial activities on a property in downtown Emeryville, CA called the Shellmound site for the law firm of Berg & Parker representing Elementis Pigments Company in a federal CERCLA case involving contamination of the site with Lead and Arsenic over a period of approximately 25 years by several companies using these elements in production.

- Performed site safety audit, review of Hazardous Materials Management Business Plan, Risk Management and Prevention Plan, Emergency Response Plan, evaluation of proposed Silane mega-gram storage facility for Matheson Gas Products, Newark CA, in conjunction with ENVIRON International Corp and Kelley Drye & Warren LLP environmental legal department. Wrote report for review by the City Of Newark CA HazMat Emergency Response department/District Attorney, Alameda Co., CA.

- Wrote training manual, established training program and trained seven 6-person emergency response teams per OSHA 29CFR 1910.120(q) for Airgas Specialty Gases, Pacific Airgas and Cascade Airgas, to the 24-Hour level of certification.

- Wrote National Emergency Response Plan for Airgas, Inc., Radnor, PA, for use in coordinating hazardous materials incident response at 44 company "hubs" in the U. S. and Canada.

- Monitored on-going Material Safety Data Sheet generation program for Airgas/Safecor (approximately 250 MSDS's compliant with ANSI Z400.1 and Canadian WHMIS standards). Wrote all orders for new MSDS's, and proofread all completed MSDS's for technical accuracy before issuing to Airgas, Inc.

- Compiled databases in MS Access for identifying 506 gases & vapors used in making specialty gas mixtures by MSDS number, as well as by physical, chemical and hazardous properties, and regulatory classification (US EPA, OSHA & DOT).

- Performed independent audit of IGP, Inc. (Colorado Springs, CO) for regulatory compliance in safety, health and environmental affairs prior to acquisition by Airgas Corp.

- Served as Airgas Specialty Gases representative to the Compressed Gas Association committee, COMPGEAP. (Compressed Gases Emergency Action Program, 5/96-5/99)

Additional Projects:
1991 - 1996

Designed and installed specialty gases scrubbing system for SoCal Airgas consisting of 2,000 cfm Venturi unit, 22 foot packed scrubber tower (both Croll-Reynolds), 600 gallon sump system with 2 pumps and associated plumbing, emergency response leaking cylinder cabinet per 1994 UFC (section 8003.3.3.3) specifications, plus assorted activated carbon traps for specific gases such as Chlorine, Hydrogen Sulfide, and hydrocarbons. Hazardous waste volume minimization was a major priority in this project, and was accomplished by appropriate selection of scrubbing agents.

- Wrote operating manual and scrubber permit application per South Coast Air Quality Management regulations to permit SoCal Airgas to operate above scrubber system.

- Designed and installed IST 21-point toxic/flammable gas monitoring system in Airgas Specialty Gases laboratory at SoCal Airgas Facility for use in plant industrial hygiene program, and response to hazardous materials incidents on-site. The system monitors the plant to the LEL for Hydrogen, and the TLV's for Chlorine, Ammonia, Sulfur Dioxide, Benzene, Nitric Oxide, and Hydrogen Sulfide.

- Developed procedures and equipment (lecture bottle guillotine, devalving chamber) for processing out-of-service lecture bottles as well as larger cylinders prior to scrapping as part of a site remediation project at SoCal Airgas facility involving 1,100 lecture bottles and 450 larger cylinders containing approximately 85 different specialty gases.

- Coordinated efforts with Earth Resources Corporation during this project for identification of material in unlabeled cylinders and containers.

- Assisted in instruction per OSHA 29CFR 1910.120 for Hazardous Materials Technician/Specialist 24 & 40 Hour Training seminars (approximately 30 seminars) at Chemical Safety Associates, Inc. San Diego, CA.

- Assisted in the compilation and writing of the "OSHA Bloodborne Pathogens Control Plan" manual for Chemical Safety Associates, Inc., San Diego, CA.

R & D Chemist
1986 - 1990

Assisted in Arsine/Phosphine gas scrubber development (engineering, testing and operation), plant decommissioning, and site remediation, including hazardous waste recycling process development. Phoenix Research Corporation, La Mesa, CA.

- Developed Arsine/Phosphine scrubber stoichiometries and processes, Arsine co-generation product (saturated Zinc Sulfate solution) purification and recycling process, Arsine purification and analytical procedures. Phoenix Research Corporation, La Mesa, CA.. The scrubber developed during field work in Fort Worth, TX was tested in March, 1989 with representatives of the US EPA and the San Diego Air Pollution Control District present, and was demonstrated to perform to the 99.9% efficiency level. The scrubber was then scaled up

15:1 and installed at the Phoenix Research plant in La Mesa, CA.

Plant Manager
1978 - 1986

Manager of a specialty gases plant, which filled and analyzed Arsine, Phosphine, Diborane, Silane and other electronics gases for semi-conductor wafer fabrication. Major customers: Intel (sole supplier of electronics gases, 1978 - 1986), Texas Instruments Corp., Hewlett-Packard, Motorola, Signetics.

- Also supplied a full line of ultra-high purity gas handling apparatus for use with the above gases. Union Carbide Corporation/Linde Division, Santa Clara, CA.. Designed and installed first Arsine/Phosphine 10 point area monitoring system in Silicon Valley for plant industrial hygiene program.

Special Projects Chemist
1976 - 1977

Gas purification and analytical procedures, gas scrubber processes and equipment. Established industrial hygiene program for Ethylene Oxide. Ran off-site analytical services program, main condenser analytical program. Union Carbide Corporation/Linde Division, E. Chicago, IN.

Analytical Chemist
1972 - 1975

Illinois Department of Public Health, Chicago, IL. Performed pesticide/polychlorinated biphenyls analyses per FDA Pesticide Analytical Manual, as well as mercury analyses by AAS on raw fish and dairy products. Also performed water analyses for potability per "Standard Methods of Water and Wastewater Analyses" for certification for the northern third of Illinois of all potable water supplies, public and private.

Professional Activities:
Member, American Chemical Society
Member, Compressed Gas Association Committee on COMPGEAP. (5/96 - 5/99)
(Compressed Gas Emergency Action Program, subcommitee on specialized ER equipment)
Served as UCC/Linde CHEMTREC representative (on-call 7/24, 1976 -1989).
Holder of US Patent Number 4,955,404: Method and Apparatus for Sealing Leaking Valves on Compressed Gas Tanks

Education:
B.S., Chemistry, Michigan State University, E. Lansing, Michigan, 1969.