CONSULTING OFFICE OF MORRIS S. FARKAS PROFESSIONAL SAFETY ENGINEER

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EDUCATION

Bachelor of Science Degree in Civil Engineering, San Jose State University	1967
 Emphasis in structural analysis and design of wood, concrete, and steel structures 	
Masters Degree in Public Administration, University of Southern California	1976
Masters of Science Degree in Safety, School of Safety and Systems Management, University of Southern California.	1983
 History and Basis of Accident Prevention Investigation of Accidents Human Factors Statistical Methods in Safety Safety Research and Design Legal Aspects of Safety (Product Safety and Product Safety Design) Safety Systems Engineering Structural Failure Analysis Management of Accident Prevention Programs 	
Environmental Safety	

CONTINUING EDUCATION

Gas Pipeline Safety Training Courses, U.S. Department of Transportation,
Pipeline Safety Institute. Completed the following 1-week courses:

- Safety Evaluation of Pipeline Systems
- Pipeline Failure Investigation Techniques
- Joining of Pipeline Materials (Welding of Steel Pipes and Fusion of Plastic Pipes)
- Gas Pressure Regulation and Overpressure Protection
- Safety Evaluation of Pipeline Corrosion Control Systems I
- Safety Evaluation of Pipeline corrosion Control Systems II
- Pipeline Regulation and Enforcement Procedures

Construction Safety, California State University at Los Angeles

Scaffold Safety Training Program, presented by the Scaffold Industry Association

PROFESSIONAL EXPERIENCE

1990 - 1991

1992

10 Years as a Bridge and Highway Engineer with State of California, Division of Highways, Bridge Department (Cal-Trans)

1961 - 1974

1974 - 1979

- 5 years in Bridge and Highway Design and Bridge & Highway Planning.
 - Designed reinforced concrete and steel highway bridges & concrete retaining walls.
 - Analyzed the design of bridge falsework and shoring systems for the construction of reinforced concrete bridges.
- 5 years in Bridge Construction.
 - Provided engineering support, supervision and inspection of construction of reinforced concrete and steel highway bridges.
 - Safety inspection responsibilities to prevent accidents to construction workers and the general public.

5-½ years as a Safety Engineer with State of California, Division of Occupational Safety and Health (Cal-OSHA)

- Conducted inspections for safe working conditions, and unsafe work practices, at
 construction sites, demolition projects, industrial plants, machine shops, warehouses,
 automotive repair facilities, loading docks, unloading of trucks and trailers, petroleum
 refineries, and commercial & residential buildings. Work activities and equipment
 inspected included but were not limited to:
- Industrial Machinery guarding and safe operation, electrical equipment, operation of industrial forklifts & pallet jackets, fixed crane & hoist operations.
- De-energization and lockout/tagout safety procedures during work on electrical circuits, and adjusting, cleaning, maintenance, repair & un-jamming operations of electrical machinery.
 Location of electrical circuit breakers for de-energization and lockout.
- Evaluated warning signs on industrial machines, rotating equipment, construction vehicles, construction machinery, and containers of flammable liquids & vapors.
- Storage of flammable materials & fire prevention.
- Toxic chemicals, respirators & local exhaust ventilation.
- Guardrails.
- Safety Harness and Lanyard fall protection for employees working at elevations above the ground.
- Construction of concrete forms, concrete pouring operations, and removal of concrete forms.
- Scaffolds, scissor lifts, ladders, work platforms, stairways & ramps.
- Roofing safety, including working on steep roofs and hot tar re-roofing operations.
- Floor openings, wall openings, roof openings & skylights.
- Backhoes and Excavating Operations.

- Haulage and Earth Moving Equipment Operations.
- Vehicle traffic control (advance warning signs, flag persons, cones and barricades).
- Vehicle backing operations, traffic control, automatic back-up alarms, and signal persons.
- Confined space entry into tanks, manholes, and pipelines.
- Mobile crane operations and contacts with overhead electrical lines.
- Slipping and tripping hazards on floors, walkways, parking lots & work areas.
- Investigated fatal and serious work accidents involving construction sites, industrial plants, petroleum refineries, warehouses, failure to de-energize and lockout and tagout industrial machinery and equipment, failure to use scaffolds or man-lifts, materials handling by industrial lift trucks (forklifts), contacts with overhead energized electrical power lines, guarding of numerous industrial machinery, falls from elevations, falls thru floor, roof & wall openings, falls thru skylights, improper vehicle backing operations, explosions inside of confined spaces, accidents at petroleum production sites, accidents involving haulage and earth moving vehicles, collapse of trenches & excavations, defective construction of scaffolds, and falls because of slipping and/or tripping hazards.
- Consulted with general construction contractors on numerous construction sites regarding safety procedures to be implemented in the use of mobile cranes and scaffolds in the vicinity of overhead energized high voltage electrical lines.
- Acting District Manager of the Los Angeles Cal-OSHA Office, supervising five safety engineers in the inspection of work sites and investigation of fatal and serious accidents (October 1, 1977 to April 1, 1978).

12-1/2 years as an Engineer with the California Public Utilities Commission

- 2 years as a Safety Engineer in the Utilities Safety Branch, reviewing the design of transmission gas pipelines. Inspecting gas pipeline construction, testing, operating pressures, maintenance and repair. Investigated gas pipeline ignition, explosions and damage from contractor excavating activities.
- 1982 1984
- 8 years as a Senior Utilities Engineer in the Utilities Safety Branch, responsible for
 the safety of gas pipelines, and overhead and underground electrical power lines
 in Southern California. Supervised four safety engineers in the inspections of gas
 pipelines, and overhead electrical power lines. Conducted numerous investigations
 of gas pipeline ignition and explosions, and contacts with energized overhead and
 underground electrical power lines. Investigated explosions of electrical switches
 in underground electrical vaults and in substations.
- Evaluated and monitored special gas pipeline replacement programs of Southern California Gas Company and Pacific Gas & Electric Company after the 1989 earthquake that resulted in extensive damage to gas pipelines in San Francisco.

Inspected, evaluated and enforced vehicle traffic control measures taken during gas pipeline construction and repair projects located in the roadway. Inspected the safety of workers welding inside of gas pipelines and inside of excavations. Enforced the use of trench plates, barricades & lighting surrounding gas pipeline excavations in order to protect both vehicular and pedestrian traffic.

35 years as a Licensed Professional Safety Engineer Consultant

September 1979 - present

Areas of expertise include:

- **Accident Prevention Planning**
- Accident Investigation and Accident Reconstruction
- Chemical Hazards Dangers and Safety Precautions
- Compliance with Building Codes
- Compliance with Cal-OSHA & Federal OSHA Safety Regulations
- Construction Safety
- Cranes
- De-energization and Lockout/Tagout of Industrial Machines & Equipment
- **Demolition Safety**
- Electrical Safety, including De-energization and Lockout/Tagout of Electrical Circuits.
- Fall Protection and Guardrail Requirements
- Forklifts and Pallet Jacks
- Guarding of Dangerous Points of Operation of Industrial Machinery
- Haulage and Earth Moving Equipment Operations (Backhoes, Bulldozers, Dump Trucks, etc.)
- Hazardous conditions creating slipping hazards and tripping hazards.
- **Industrial Safety**
- Ladder Safety
- Loading Docks
- Loading of Trucks and Trailers
- Unloading of Trucks and Trailers
- Petroleum Refinery Construction and Maintenance Operations
- Pipeline Safety
- Products Safety & Liability
- Roofing Safety, including working on steep roofs and hot tar re-roofing operations
- Safe Design of Equipment & Machinery
- Safe Design and Construction and Maintenance of Pedestrian Walkways, Stairways and Ramps
- Safety Harness and Lanyard and Tie-off Anchorage Requirements
- Safety Manuals, Operational Manuals, Safety Instruction Videos
- Safety Training and Supervision
- Scaffolds, Man Lifts, Work Platforms
- Vehicle Backing Operations, traffic control, automatic back-up alarms, and signal persons
- Vehicle Traffic Control, Cones, Advance Warning Signs, Flag Persons and Barricades
- Warehouse Safety Operations
- Warning Signs, Warning Cones and Warning Tape
- Product Warning Labels, Safety Manuals, Safety Videos, Material Safety Data Sheets

TEACHING EXPERIENCE

Long Beach City College

1975 - 1989

- Accident Prevention
- Construction Safety

Occupational Safety and Health

Cerritos College

1977

• Construction Safety

University of Southern California

1981 - 1983

• Potential for Accidents in the Workplace Due to Human Factors, presented to corporate safety managers.

Northrop Corporation

1984

• Accident Prevention for manufacturing production supervisors, which included fall protection from work platforms, confined space safety precautions during the use of solvents inside of the aircraft fuselage, and personal protective equipment. Custom designed and presented to more than 40 supervisors over an 18 week period at the Torrance Aircraft Plant.

California State University at Los Angeles

1990

• Safety Programs adopted and implemented by major general construction contractors, manufacturing plants, gas and electric utilities, water and telephone companies, city, county and state government construction projects, and city and county maintenance departments. Presented to graduate students in the Master of Science in Safety Degree program in Occupational Safety and Health.

Trade Unions (Southern California)

• Construction Safety for plaster, painting and drywall apprentices, and heating/ventilating/air-conditioning (HVAC) journeymen.

1996

ASSISTED IN DEVELOPMENT AND PREPARATION OF SAFETY PROGRAMS FOR INDUSTRY

• Construction (General Contractors)

1983 - 2004

- Manufacturing (Safe Design of Machinery)
- Petroleum Pipelines

PROFESSIONAL ACCREDITATION & COMMENDATION

•	Registered Professional Civil Engineer in California (No. 26967)	1976 - 1998
•	Registered Professional Safety Engineer in California (No. 2120)	1977 - present
•	Member of American Society of Safety Engineers	1989 - present
•	Associate Member of Scaffold Industry Association	1983 - 2008

•	Member of Associated General Contractors of America	1982 - 2000
•	Member of Associated General Contractors of California Safety	1997
	Health and Environment Committee	
•	Associate Member of Truss Plate Institute	1993 – 1994
•	Received written commendation from the California Public Utilities	1991
	Commission for investigation of the Southern Pacific Railroad train	
	derailment on the potential impact of the safety of adjacent buried	
	gas transmission supply lines located in Santa Barbara County.	

REFERENCES

A list of attorneys for whom I have testified for in trial and deposition are available upon request.