

EDM Services, Inc.



Brian L. Payne, P.E.

PRESENT POSITION:

Principal, EDM Services, Inc., Simi Valley, California

EDUCATION/PROFESSIONAL AFFILIATION:

California State University, Fresno, B.S. Civil Engineering, Tau Beta Pi, Magna Cum Laude
University of Wisconsin, Biotechnical Slope Protection and Erosion Control
University of Texas, API Petroleum Measurement School
California State Fire Marshal, Handling Pipeline Emergencies
Shipely Associates, Effective Business Writing
Supervisory Skills and Management Training
University of California, Irvine, Candidate, Hazardous Waste Management Program
Member National Society of Professional Engineers (NSPE)
American Society of Civil Engineers (ASCE)
American Water Works Association (AWWA)
Lifeline Earthquake Engineering

PROFESSIONAL REGISTRATION:

Arizona, Professional Engineer, PE 24863
California, Civil Engineer, RCE 37020
Colorado, Professional Engineer, PE 26919
Hawaii, Professional Engineer, PE 9098
Idaho, Professional Engineer, PE 8593
Louisiana, Civil Engineer, RCE 24363
New Mexico, Professional Engineer, PE 11210
Oregon, Professional Engineer, PE 15233
Utah, Professional Engineer, PE 8880
Washington, Professional Engineer, PE 34216
Wyoming, Professional Engineer, PE 5937

COMPUTER EXPERIENCE:

AutoCAD - Computer Aided Drafting Program
ISDS - Structural Analysis Program
DCA - Civil Engineering Design Program
Lotus 123 - Spreadsheet Program
Access - Microsoft Relational Database Program
Paradox 4.0 - Borland Relational Database Program
Microsoft Excel - Spreadsheet Program
Microsoft Project Manager - Project Management, Estimating, Tracking and Critical Path Scheduling Program
Microsoft Word - Work Processing
WordPerfect - Word Processing and Text Preparation Program
DOS - Personal Computer Operating System
Fortran - Mainframe Computer Programming Language

PUBLIC and INDUSTRY SERVICE:

1999 - Present Board of Directors, University of California, Santa Barbara, Economic Forecast
1996 - Present Board of Directors, YMCA, Simi Valley
1995 - Present Board of Directors, President, Rotary Club of Simi Valley

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1999 - Present API 1160, Pipeline Integrity Standard Committee

PUBLICATIONS: Hazardous Liquid Pipeline Risk Assessment, California State Fire Marshal, March 1993.

California Hazardous Liquid Pipeline Risk Assessment, Proceedings of the 1993 International Pipeline Risk Assessment, Rehabilitation and Repair Conference, September 1993.

Block Valve Effectiveness and Seismic Activity - California Hazardous Liquid Pipelines, Proceedings of the 1994 International Pipeline Risk Assessment, Rehabilitation and Repair Conference, September 1994.

California Hazardous Liquid Pipeline Risk Assessment, Proceedings of the 1994 API Pipeline Conference, April 1994.

Risk Assessment of California Low Pressure Crude Oil and Crude Oil Gathering Lines, California State Fire Marshal, July 1996.

Fiber Optic "Trip Wire" Monitors Chemical Pipeline and Reports on Third Party Intrusions, Pipe Line and Gas Industry, May 2000.

Innovative Pipeline Mitigations Employed to Minimize Chemical Pipeline Risks, Chemical Engineering Expo, Houston, Texas, June 2000.

Improving Pipeline Safety, Chemical Engineering Magazine, July 2000.

Keeping Pipelines Safe From Harm, Chemical Engineering Magazine, May 2001.

Improving Pipeline Safety - Risk Mitigation Techniques You Don't Think Of, Independent Liquid Terminals Association (ILTA), June 2001.

EMPLOYMENT HISTORY:

1989 - Present President, EDM Services, Inc., Simi Valley, California

Responsible for all phases of the management and direction of the firm. This includes project management, financial management, staff supervision, peer review, marketing, regulatory compliance, personnel, etc. The following is a partial list of the major projects Brian has managed during his tenure with the firm:

- **Pipeline Risk Assessments** - Conducted a risk assessment of California's regulated hazardous liquid pipelines. The published report document is considered a landmark study by many in the pipeline risk assessment field. A second risk assessment was completed in 1996, covering California's crude oil gather lines. A number of project specific risk assessments have been completed for numerous projects throughout the United States.
- **Electrical Power Plants (California Energy Commission)** - Conducted the Facility Design reviews for numerous power plants within the State. These plants ranged in size from 50 MW to over 1,000 MW. This work included reviewing the Applications for Certification (AFC), testifying during public workshops, preparing facility design assessments for each project, developing conditions of plant certification, providing testimony at evidentiary hearings, etc.
- **Plan Check and Inspection** - Managed a number of major petroleum project plan check and construction inspection projects for Santa Barbara County. Some of these project included: All American Pipeline, Texaco pipeline abandonment, various slope and stream channel instability

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- projects, etc.
- **Regulatory Compliance** - Directed the Exxon SYU Project, Fugitive Emission Component Identification Project. This project included line verification using existing P & ID's, line walk down, database development, and preparation of a complete inventory of all components in ROC service. Upon completion, the project included over 220,000 annual leak path inspections on 50,000 components, located at Exxon's Las Flores Canyon, Platform Heritage, Platform Harmony, and Platform Hondo facilities.
- **Rail and Locomotive Projects** - Provided designs, permit processing and project management on numerous railroad projects for Texaco and Union Pacific Railroad. These projects have included storm water handling at locomotive servicing facilities, locomotive servicing facility design, rail car loading/offloading facilities, etc.
- **Pipeline Designs** - Managed numerous pipeline design, replacement and relocation projects for Ultramar, Chevron, Southern California Gas Company, Wickland Oil, etc. These projects have included project permitting, risk assessment, detailed design, structural analysis, construction management, field inspection, operation and maintenance manual development, start-up assistance, as-built drawing preparation, etc.
- **Pioneer Chlor Alkali Project** - Brian managed the design of a seven mile chlorine pipeline project in Saint Gabrielle, Louisiana. This project incorporated several innovative designs. These designs mitigated the risks associated with this hazardous service. These mitigations included: marker tape over the line, EDM Services' proprietary fiber optic trip wire technology, reinforced concrete coated pipe, and EDM Services provided SCADA and leak detection system.
- **Structural Design, 6th Street Utility Bridge** - Brian recently completed the design and permitting of the 6th Street Utility Bridge, located in Long Beach, California. This structure spans 560 feet, across the Los Angeles River. The bridge will be raised four feet to accommodate higher levies and flood walls along the channel. This also required coordination of the relocation of several utilities which are supported on the bridge.
- **Pipeline Terminal, Chevron Pipe Line Company, Equilon 20" Connection** - Brian recently completed the turn-key design, permitting, and construction of this \$1,600,000 facility. This project included a 20" pipeline connection, with three parallel 8" delivery meters.

1987 - 1989

Project/Division Manager, Hood Corporation, Whittier, California

- Responsible for the construction of the \$6,000,000 Exxon, Santa Ynez Unit, onshore pipeline and power cables project.
- Managed a division which performed \$4,000,000 of earthwork and environmental construction projects.
- Performed various structural, shoring and structural designs to support construction.
- Prepared estimates and bid packages for well \$10,000,000 annual construction.
- Managed the \$1,800,000 construction of 5,000 feet of various sized oil, water, and steam lines in Wilmington, California.
- Managed the \$400,000 design and construction of a 12" natural gas line for Harbor Cogeneration in Wilmington, California.
- Managed the \$700,000 replacement of 10,000 feet of an 8" crude pipeline for Unocal in San Luis Obispo, California.
- Managed the \$600,000 construction of dual 24" chilled water liner for Energy Factors in San Diego, California.

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1986-1987

Project Engineer/Acting Division Engineer, Chevron Pipe Line Company, Salt Lake City, Utah

- Responsible for the overall engineering associated with this systems pipelines, pump stations and terminals. This included tanks, pipelines, SCADA system, buildings, and other fixed facilities.
- Redesigned and constructed a \$600,000 crude oil truck unloading facility at Rangely Station.
- Managed the Division's \$1,000,000 crude measurement improvement program.
- Conducted an environmental review of the Division's facilities.
- Supervised eight other engineers/technicians.
- Prepared and administered the Division's \$5,000,000 to \$10,000,000 capital budget.
- Negotiated the tie-in agreement and designed injection and custody transfer facilities.
- Developed Spill Prevention, Containment and Contingency Plans (SPCC) for the Division's facilities.

1985-1986

Operations Supervisor, Chevron U.S.A., Pipe Line Division, La Mirada, California

- Responsible for operating 620 miles of crude and product pipelines, pump stations and terminal facilities in Southern California.
- Supervised 15 to 20 operations personnel including meter provers, gaugers, switchmen, pipeliners, truck unloaders, and marine tanker unloaders.
- Negotiated shipper agreements.
- Wrote operating procedures and training documents.
- Performed manpower utilization studies.

1983 - 1985

Project Engineer, Chevron Pipe Line Company, Concord, California

- Designed and prepared the construction bid package for the \$16,000,000, 16.2 mile, onshore, 20" sour gas and 24" wet oil, Point Arguello pipelines. This included route selection, hydraulic analysis, pipe stress analysis, structural design, technical permitting support, specification preparation, etc.
- Procured the project's \$14,000,000 sour service line pipe.

1982 - 1983

Project Engineer, Chevron Corporation, San Francisco, California

- Designed a high pressure steam injection pipeline and related structures for the Heber, California geothermal project.
- Analyzed the San Francisco International Airport jet fuel storage tank pile foundations for seismic response.
- Supervised a structural engineering group.
- Inspected, analyzed and rated the Richmond Refinery traffic bridges.
- Analyzed the Willbridge Asphalt Refinery Guyed Stack for structural integrity.

1981 - 1982

Project Construction Engineer, Chevron Corporation, Belle Chase, Louisiana

Designed and managed the construction of a \$5,000,000 replacement wharf, chemical loading/unloading facilities, interconnecting pipelines, pipe and vehicular bridge, and control building.

1981

Professional Engineer, Chevron Corporation, San Francisco, California

Performed various civil/structural engineering designs. Some of these included:

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- Performed current/wind mooring limit structural analysis for Empire Terminal crude oil tanker wharf.
- Prepared cost estimate for Kern River Fluidized Bed Combustor hazardous waste site.
- Provided various drainage, structural, foundation and other designs for the Richmond Lube Oil Project.

1979 - 1981

Design Engineer and Partner, Giannetta Engineering, Fresno, California

Prepared preliminary and final subdivision maps, processed permits and general plan amendments, and prepared improvement drawings for numerous industrial, commercial, and residential projects. This included, sewer systems, water distribution systems, storm drains, curb/gutter/roadways, grading plans, structural steel design, timber design, concrete design, land surveying, construction staking, survey crew supervision, drafting, draftsman supervision, specification writing, construction inspection, etc.