

EDM Services, Inc

Terry L. Walls, P.E.



PRESENT POSITION:

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

EDUCATION/PROFESSIONAL AFFILIATION:

Texas A&M University, BS Civil Engineering, Member ASCE
University of Texas, API Measurement School
University of Nevada at Reno, Pipeline and Oil Field Fire Fighting School
Instrument Society of America, Control Valve Sizing and Selection
Process Management Improvement, Inc., Management training - the Deming Method
Supervisory Skills and Knowledge Program, Management training

PROFESSIONAL REGISTRATION

Texas, Civil Engineer, RCE 67679

COMPUTER EXPERIENCE:

AutoCAD 386 release 12 - Computer Aided Design Program
DCA - Civil Engineering Land Development via AutoCAD
CADPIPE - Piping Design Program via AutoCAD
Lotus 123 - Spreadsheet Program
dBase III - Database Management Program
WordPerfect - Word Processing and Text Preparation Program
DOS - Personal Computer Operating System
BASIC - Personal Computer Programming Language
Fortran - Mainframe Computer Programming Language
RSX-11M - Digital Equipment Corporation Operation System

PUBLIC SERVICE:

1997 - Present Board of Directors, YMCA, Simi Valley
1998 - Present Board of Directors, Rotary Club of Simi Valley

EMPLOYMENT HISTORY:

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

- Provided numerous designs, permit processing and project management on numerous railroad projects for Ultramar, Inc., Texaco and Union Pacific Railroad. These projects have included storm water handling at locomotive servicing facilities, locomotive servicing facility design, track design, rail car loading/offloading facilities, etc.
- Managed numerous pipeline design, replacement and relocation projects for Ultramar, Chevron, Jacobs Engineering Group, Pioneer Chlor Alkali, 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.
- Prepared number pipeline emergency response plans, operations and maintenance manuals, and other regulatory compliance documents for major oil and gas pipeline customers.

EDM Services, Inc

- Managed the design, fabrication, programming, and installation of numerous pipeline SCADA and leak detection systems.
- Served as Project Manager and provided turn-key design, permitting, and construction of all offsite facilities for a major refinery expansion.
- Ultramar Pipeline Relocation Program - Butch designed, permitted, and managed this \$4,200,000 construction project for the Ultramar Wilmington Refinery. The project involved the relocation of several pipelines where conflicts existed with the construction of new municipal projects. The relocation work began in early 1995 with the construction of 18 pipeline relocations and continued through 1996 with an additional 20 relocations. These projects required close coordination with local agencies and a number of utility/substructure owners.
- Ultramar Water Pipeline Relocations - Butch designed and permitted this \$500,000 project to upgrade and relocate the Ultramar Wilmington Refinery potable and fire water metering/backflow prevention facility and the extension of existing water pipelines. The new pipelines were completed in 1996.
- Wickland Pipeline SCADA System - Butch designed and managed the fabrication of a complete SCADA system for the Wickland Bay Area Pipeline System. This system connected a number of Bay Area refineries to the Martinez terminal.

1988 - 1989

District Supervisor, Chevron Pipe Line Company, Wink, Texas

Responsible for the management, operation, maintenance of 750 miles of crude oil and LPG pipelines, including two major crude oil tank farms in West Texas and Southeast New Mexico.

Responsible for the design and construction of various capital and expense projects.

Supervised the work of 45 pipeline operations and maintenance personnel.

- Designed and constructed \$150,000, 3200 sq.ft., office building at Wink Station.
- Designed and constructed \$50,000 access roadway and parking lot at the above mentioned new office complex.
- Designed and constructed sanitary sewer system at the above mentioned office complex.
- Design drainage plan for the above mentioned office complex.
- Performed a feasibility study to replace the existing SCADA system at the Houston Distribution Center with a similar system or consolidate its operation with any or all (5) other control centers within Chevron Pipe Line Company.
- Designed and constructed fresh water and sanitary sewer systems at Porterville Station.
- Designed and constructed a 6 in., \$40,000 portable mechanical meter prover for the Wink District.
- Designed and constructed a \$65,000 piping manifold replacement project at Monahans Station.
- Managed the construction of a \$400,000 LPG measurement improvement project in West Texas and Southeastern New Mexico.
- Managed the reconditioning of several 50,000 - 120,000 barrel crude oil storage tanks.

1986 - 1988

Chief Dispatcher, Chevron Pipe Line Company, Salt Lake City, Utah

Responsible for the operations scheduling, control, and measurement of: a 150 mile parallel 10" crude pipeline system, a 137 mile 10" CO2 pipeline system, a 750 mile parallel 10" products pipeline system, and 9 crude oil/product tank farms and terminals. Provided

EDM Services, Inc

operations engineering review of all facility designs and performed various hydraulic analyses and simulations of various pipeline systems. Supervised the work of 6 schedulers and dispatchers, and 1 measurement specialist.

- Performed numerous hydraulic simulations and studies of pipeline operations.
- Reviewed hydrostatic test plans for the Rangely to Salt Lake City crude pipeline and Salt Lake City to Boise refined products pipeline.
- Reviewed the design of automated crude oil measurement facilities at Rangely Station.
- Reviewed the design of automated crude oil measurement facilities at Kimball Station.
- Reviewed the design of automated refined product measurement facilities at Pocatello Terminal.

1985 - 1986

Technical Maintenance Supervisor, Chevron Pipe Line Company, Buras, Louisiana

Responsible for the design and maintenance of all computer controlled facilities in the New Orleans Division as well as the maintenance of all mechanical facilities in the Buras District. Provided field engineering design and review of all new facilities installed in the Buras District. Supervised the work of eight I&E Technicians and Mechanics.

- Performed a feasibility study and executed a plan to unify the control of the former Gulf and former Chevron Pipe Line control centers at Ostrica and Empire, La respectively into one control center.
- Defined the scope of work, reviewed drawings, and inspected the construction of the installation of a 30,000 barrel per day pumping and measurement facility by EXXON Pipeline at Empire, Louisiana.
- Performed a pump efficiency study of the Empire to Pascagoula pipeline. The pumping units were subsequently downsized by 50 percent.
- Designed and constructed an automated refueling system for a diesel powered electrical generator.

1983 - 1985

Pipeline Engineer, Chevron Pipe Line Company, New Orleans, Louisiana

Responsible for the design and construction of a pipeline computer control (SCADA) center as well as various capital and expense design and construction projects for onshore and offshore pipeline facilities.

- Designed and constructed a \$500,000 pipeline SCADA system at Empire, Louisiana.
- Designed and constructed a \$300,000 reinforced concrete control building for the SCADA system above.
- Designed a hydraulic modeling and leak detection software program for the above mentioned SCADA system.
- Designed and constructed a 4 in. diameter mechanical meter prover for Main Pass 41 Terminal.
- Performed project inspection on the Mobile Bay 861, 10" sour gas pipeline project.
- Performed project inspection on the Falco/Chevron hot tap in Breton Sound, Block 2.
- Performed project inspection on Kerr McGee/Chevron 16" - 20" subsea hot tap in Breton Sound, Block 2, Block 27; the largest in the world at the time.
- Performed project inspection on Tenneco/Chevron subsea hot tap in South Timbalier, Block 27.
- Constructed a 4 in., 10 mile long, offshore crude oil pipeline from Eugene

EDM Services, Inc

- Island Block 133 to South March Island Block 268 in 60 ft. of water.
- Designed and Constructed a sanitary sewer system for Empire Terminal.
- Designed and constructed an expansion of the fire water system at Empire Terminal.
- Designed and constructed a barge unloading/loading metering facility upgrade at Empire Terminal.
- Performed the feasibility study to provide alternative methods of performing free water knock out of crude oil at Fourchon Terminal.

1981 - 1983

Pipeline Engineer, Chevron Pipe Line Company, El Paso, Texas

Responsible for various capital and expense design and construction projects.

- Designed and constructed a \$50,000 addition to pumping facilities at the Snyder Station.
- Designed, performed the feasibility study, and constructed additional gathering pipelines in West Texas.
- Designed, and constructed several 30 ft. microwave radio antenna towers in West Texas.
- Designed, and constructed the reconditioning of 50,000 barrel crude oil storage tank in Iraan, Texas.
- Designed, and constructed the replacement of butane and crude oil pipelines near Snyder, Texas.
- Designed, and constructed numerous cathodic protection facilities in West Texas and New Mexico.
- Constructed a 12 in. diameter mechanical meter prover at Wink, Texas.