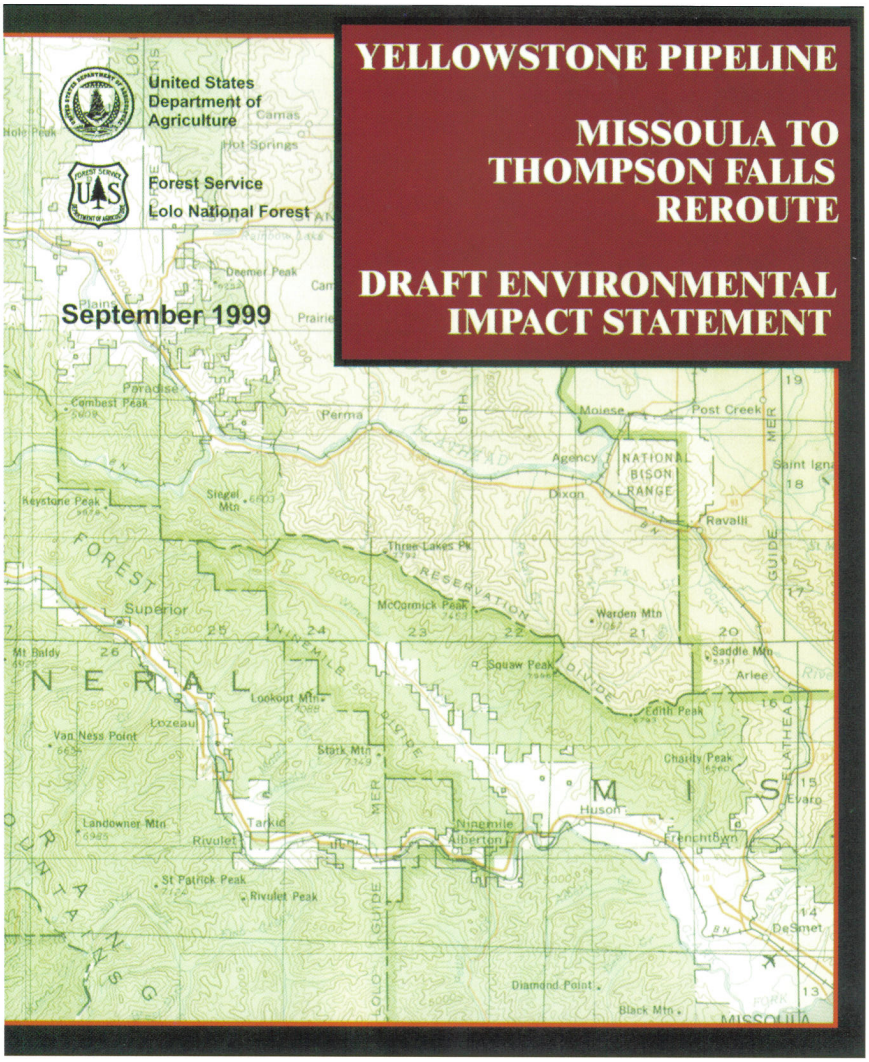
EDM Services, Inc.

Regulatory Compliance, Environmental Permitting, and Pipeline System Safety

- *Engineering*
- *Design*
- *Project Management*
- *Pipeline Engineering Services*
- *System Automation and Process Control*
- *Civil and Public Works Services*
- *Regulatory, Compliance, Environmental Permitting and System Safety*
- *Construction Support*
- *Trip Wire® System*
- *Cathodic Protection*

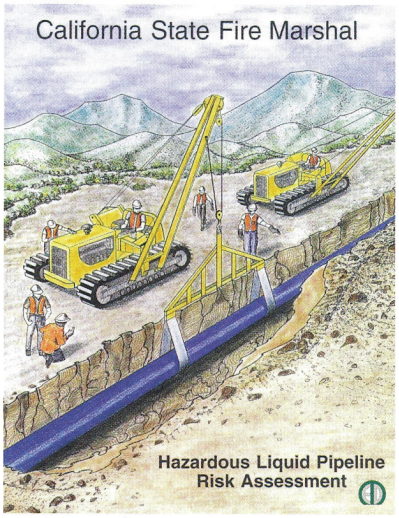
As regulatory requirements have increased, the firm has continued to grow in its ability to assist customers with their compliance with continually changing regulations. Some of the services we have provided include:

- Environmental permitting,
- Regulatory compliance,
- Pipeline risk assessments,
- Pipeline system safety analyses,
- Risk mitigation for severe service pipelines and pipelines located in Unusually Sensitive Areas (USA's) and High Consequence Areas (HCA's); etc.
- Developed, implemented, and conducted fugitive emissions inspection and monitoring programs;
- Conducted facility audits for OSHA, U.S. Department of Transportation, California State Fire Marshal, and other agency compliance;
- Obtained California Division of Oil and Gas Clearance to Construct permits;
- Prepared numerous operations and maintenance manuals to meet State and Federal regulations;
- Prepared environmental permit applications, processed environmental permits, and gathered supporting data for a variety of projects;
- Conducted field walk-downs, prepared process flow diagrams, and piping and instrumentation drawings to comply with OSHA and other regulations;
- Prepared spill response, emergency response, and SSPC plans for a number of facilities;
- Conducted process hazard reviews;
- Developed the anticipated frequency of various incidents for all modes of transportation;
- Recommended a variety of mitigation measures to reduce the environmental and personal risks of transportation facilities;
- Interfaced with various agencies to provide system safety expertise;



The EDM Services team provided the transportation risk assessment, developed mitigation measures, participated in public hearings, and worked with agency staff on this controversial pipeline project in Idaho and Montana.

- Consulted with various operating companies to provide third party assessments of pipeline risks, mitigation measure development, and agency interface;
- Performed specialized studies for the United States Department of Energy, California State Fire Marshal, etc.
- Provided third party design (plan check) and construction reviews of proposed facilities;
- Provided expert testimony;
- Published several papers regarding pipeline risks, seismic performance of welded steel pipelines, pipe stresses, etc.



The internationally recognized Hazard Liquid Pipeline Risk Assessment, *published by EDM Services on behalf of the California State Fire Marshal, continues to be the reference document for evaluating hazardous liquid pipeline risks.*

The firm has published several documents which have set new benchmarks in the pipeline risk assessment field:

Members of the EDM Services team are recognized as experts in the assessment of pipeline risks. EDM Services has published internationally recognized documents regarding the risks associated with pipeline transportation. The firm has also evaluated the risks associated with other transportation modes, including rail, truck, and marine. This work has enabled the EDM Services staff to participate as experts on several transportation projects. In this role, the staff has:

- California State Fire Marshal - The firm conducted and published the *California Hazardous Liquid Pipeline Risk Assessment* for the California State Fire Marshal in 1993. This internationally recognized study analyzed the risks associated with 7,200 miles of California's regulated hazardous liquid pipelines.
- U.S. Department of Energy - Conducted and published the *California Pipeline Risk Assessment* for the Department of Energy and the California State Fire Marshal in 1995. This study inventoried the state's unregulated crude oil gathering lines and analyzed the leak history of these lines over a two year period. A GIS database interface was also prepared.
- Environmental Impact Studies - The firm has prepared the system safety analyses for several major pipeline projects. This work has set new standards in the industry.

Other EDM Services

Pipeline Services

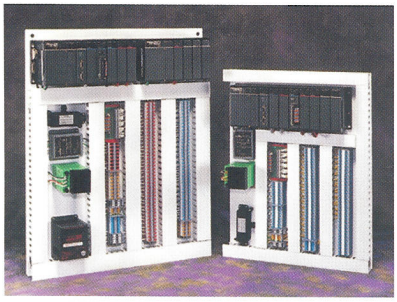
The firm provides a complete range of pipeline, communications system, and utility engineering services for cross county and urban pipeline projects. These services include:

- routing and feasibility studies
- technical and environmental permitting
- detailed engineering, design, and analysis
- SCADA and leak detection system design, fabrication and programming
- project and construction management
- turnkey design, permitting, procurement and construction projects
- operations and maintenance manuals
- emergency and spill response plans

Plant Engineering Services

The EDM Services team has decades of combined experience designing, permitting, constructing, operating and maintaining rail, pipeline pump station, terminal, tank farm, chemical plant and refinery facilities. Some of these facilities have included:

- pipeline pump stations
- custody transfer measurement facilities
- marine terminals
- piping manifolds
- crude oil and refined petroleum products tank farms
- support structures and bridges



System Automation and Process Control

EDM Services designs, programs, fabricates, and installs Supervisory Control and Data Acquisition (SCADA) systems; Programmable Logic Controllers (PLC's); and communications systems. Some of these system automation and process control services include:

- Underwriter Laboratory® (UL) registered industrial panel fabrication
- *Trip Wire*® (Patent Pending) third party intrusion detection and locating system
- Wonderware® Approved System Integration Partner
- Programmable Logic Controller (PLC) programming
- Human Machine Interface (HMI) development
- dedicated and integrated communications systems
- customized applications
- redundant and "hot standby" systems
- operating data archieving/databases
- turnkey systems

EDM Services, Inc.

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