

REPRESENTATIVE PROJECTS

Litigation Support and Arbitration

- Assisted attorneys in arbitration of \$300 million disagreement between fuel and oil purchaser buyer.
- Assisted attorneys in a multi-million dollar lawsuit related to olefins (ethylene) plant expansion project on issues concerning process, plant performance, equipment, plant production, project management and project economics.
- Assisted attorneys representing engineering and construction company in a multi-million dollar lawsuit related to ethylene plant on issues concerning plant performance, furnace design and performance, and plant automation. Provided testimony.
- Assisted attorneys in a research project concerning use of asbestos in refineries, petrochemical plants and other industrial facilities.
- Assisted attorneys in a lawsuit concerning the failure of a valve in a refinery. Worked on issues concerning cause and origin, and business interruption. Provided testimony.
- Assisted attorneys in a lawsuit related to ethylene plant furnace tubes failure on issues concerning cause and origin, business interruption, insurance policy interpretation and property.
- Assisted attorneys in a lawsuit concerning refinery fire. Worked on property damage and business interruption.
- Assisted attorneys representing E&P Company in a lawsuit concerning contamination caused due to leaks from pipelines. Worked on issues concerning pipeline standards, regulations, industry practices and related contamination.
- Assisted attorneys in a case related to Superfund laws and related environmental laws. Provided testimony.
- Assisted attorneys representing insurance companies in a groundwater contamination case on matters concerning historical pollution and cleanup costs. Provided testimony.
- Assisted attorneys representing a contractor in arbitration related to offshore platform equipment construction problems caused due to vendor delays and breach of contract.
- Assisted attorneys in a lawsuit concerning poly-olefins plant explosion on matters related to process design and cause of the explosion.
- Assisted attorneys in a lawsuit concerning supply of contaminated crude oil that caused problems in a refinery.
- Assisted attorneys in a lawsuit concerning fertilizer plant explosion on matters related to property damage and business interruption. Provided testimony.
- Assisted attorneys in a lawsuit related to chemical plant explosion. Provided testimony.

- Advised attorneys in case alleging poor quality crude oil was received for several years from large petroleum corporation.
- Assisted attorneys defending an engineering and construction company against an unfriendly takeover.
- Assisted attorneys and provided testimony in personal injury cases related to accidents, fires and explosions at chemical plants, petrochemical plants and refineries.
- Served as arbitrator in LPG tanker product loss dispute.
- Assisted attorneys in a case involving allegations that contractor improperly constructed a "grassroots" oil refinery.

Provided assistance and served as experts in controversies involving:

Process, Operations and Equipment:

- Barge explosion
- Tankfarm fire and explosion
- Hydrocracking unit fire
- Reforming unit fire
- Fluid coking unit damage
- Hydrogen sulfide release
- Alkylation and reforming unit damage
- Furnace tube failures
- Metallurgical problems in process units
- Gas compressor failures
- Hydrocracker accidents
- Ethylene meter station accident
- Asphalt and gas plant evaluations
- Improper design and operation of gas plant
- Ruptured gas lines
- Process hazards
- Process reviews
- Natural gas plants

Property Damage and Business Interruption:

- Ammonia plants
- Refineries
- Ethylene plants
- Gas plants
- Chemical Plants
- Oil and platforms and pipelines
- Industrial facilities
- Hazardous waste facilities

Business, Finance and Project:

- Project economics
- Construction disputes
- Breach of fuel oil contracts
- Excessive turnaround costs
- Project management
- Sale and purchase of feedstocks
- Refinery and petrochemical product quality
- Plant evaluations
- Mergers and acquisitions
- Bankruptcies

- Value of computer programs/data files
- Lost yields in refinery operations
- Price fixing of petroleum and its products
- Facility values and cost estimates

Environmental, Health and Safety:

- Pipeline leaks
- Regulatory problems
- Hazardous gas releases
- Superfund sites
- Hazardous waste contamination
- Refinery sabotage
- Industrial hygiene
- Environmental liability
- Groundwater contamination

Miscellaneous:

- Crude oil pipeline accident
- Truck loading accident
- Pump failures
- Propylene shipment by tanker
- Waste water and storm water pipeline damage

Accident Investigations, Insurance Claim Review and Negotiation Advice

Investigated:

- Cause of reformer catalyst poisoning in refinery
- Cause of furnace tubes failure in an ethylene plant
- Cause of tubes failure in an ammonia furnace
- Cause of fire at a refinery
- Cause of hydrocarbon fire and explosion
- Cause of ethylene plant accidents
- Cause of motor coach fires
- Cause of fires at various chemical plants
- Cause of tank farm fires
- Cause of valve failures
- Cause and origin of explosion at a chemical plant
- Cause and origin of explosions at a fertilizer plant
- Accident at a chemical plant causing injury to workers
- Accident at an ethylene plant causing injuries to the workers

Prepared:

- Property damage and business interruption claim for explosion at petrochemical facility
- Property damage and business interruption claim for refineries
- Property damage and business interruption claims for various chemical plants
- Property damage and business interruption claims for gas plants
- Property damage claim for fertilizer plant
- Property damage claims for tank fires
- Property damage claims for process industries due to natural disasters
- Property damage claims for environmental accidents and resulting pollution

- Property damage and business interruption claims for liquid and gas pipelines
- Claims for asbestos and lead cleanup
- Property damage for hydrogen plant fire
- Claims for business interruption losses due to project delays, breach of contract, and turnaround costs for process industries

Advised/Negotiated:

- Major insurance claims concerning refineries, petrochemical plants and chemical plants
- Property damage and business interruption losses for other process industries
- Claims for damages to pipelines

Facility Appraisals, Evaluations and Fair Market Value Determinations

Appraisals:

- Refining facilities for operating companies, banks and governmental agencies
- Gas facilities for operating companies
- Petrochemical facilities for operating companies and other companies
- Chemical facilities for operating companies
- Process facilities for operating companies
- Oil and gas minerals

Evaluations:

- Refineries for operating companies, governmental agencies and investors
- Gas plants for operating companies
- Petrochemical plants for operating companies, governmental agencies and banks
- Ammonia and fertilizer plants for operating companies
- Chemical plants for operating companies
- Process plants for operating companies

Fair Market Value Determinations:

- Refineries for operating companies
- Petrochemical plants for operating companies
- Gas plants for operating companies
- Ammonia plants for operating companies
- Chemical plants for operating companies

Market Studies, Feedstock and Product Evaluations

- Aviation fuel distribution studies
- Feedstock studies for petrochemical plants
- Propane pricing formulas
- Petroleum product demand
- Crude oil evaluation studies
- Gulf coast refinery requirement estimate
- Refinery feedstock pricing
- Product demand studies for chemical products
- Product demand studies for ammonia products

Feasibility Studies

- Feasibility and site selection studies for refineries
- Feasibility and site selection studies for Petrochemical plants
- Feasibility studies for gas plants
- Feasibility and site selection studies for liquid and gas pipelines
- Feasibility study for ammonia plants
- Feasibility study for ethanol plant
- Feasibility study for methanol plant
- Feasibility study for LNG plant
- Feasibility studies for chemical plants

Project Review and Project Management

- Project progress review and analysis for refineries and petrochemical plant construction.
- Project management for refinery and ethylene plant construction and reconstruction.
- Project monitoring for owners/investors – refineries, petrochemical plant and chemical plants.
- Progress review and analysis for construction disputes and projects.
- Project review and management for chemical plants construction projects.
- Project progress review related to reconstruction of chemical plants and industrial facilities destroyed in explosion/fire for insurance companies.
- Owners' representatives in selecting engineering and construction companies for petrochemical plants.

Technical Assistance

- Correlation of petrochemical replacement costs with plant size.
- Review of costs and efficiencies of power generation processes.
- Advised on airborne pollutants.
- Prepared Tetra Ethyl Lead studies.
- Advised on furnace technology for ethylene and ammonia plants
- Selection of process for chemical facility.
- Selection of process for ethylene facility.
- Advised on startup and commissioning of ethylene plants.
- Advised on selection of furnace tubes for ethylene furnaces.
- Advised on use of fuel additives.
- Advised on availability of used refineries and chemical plants.
- Advised on availability of new and used equipment for chemical plants.
- Advised regarding cleanup of contaminants and remediation for a polluted site.
- Advised on metallurgical failures.
- Advised on plant automation.

- Advised on good engineering practices and industry standards.

Economics and Project Financing

- Evaluation of economic value of crude oils, products and the product yield patterns for certain U.S. and European refineries as a function of crude oil feedstock.
- Calculation of economic effects of property losses.
- Advised on project financing for refinery projects.
- Advised on financial requirements for a refinery project.
- Advised on availability of finance for major projects and ventures.
- Advised on investment and operating costs for refineries, petrochemical costs and gas processing.
- Performed technical and economic critique of project investments.
- Evaluated gas gathering pipeline investment, project future revenue and recommended purchase offers.
- Prepared future net revenue report for pipeline companies gas processing for SEC reporting

Contracts and Bids

- Advised on construction contracts/disputes related to refineries and petrochemical plants.
- Evaluated operations and maintenance bids and contracts for petrochemical facilities.
- Advised on feedstock contracts for ethylene plants.
- Advised on product pricing and contracts for refineries.
- Advised on gas contracts.
- Advised on bids to purchase gas plants and gathering system.
- Advised on bids for oil and gas properties.
- Advised on contracts for oil and gas leases.
- Advised on vendor and sub-vendor contracts for major projects.

Technology Services

- Advised regarding simulation packages for ethylene plants, refineries and chemical plants.
- Advised on yield models for refineries.
- Advised on issues related to plant automation.
- Advised on issues related to enterprise resource planning packages.
- Advised on issues related to systems and applications update.
- Advised and used project management software applications.
- Advised and used statistical models.
- Advised and developed statistical computer models for international crude oil pricing.

SERVICES:

- Accident Investigations
- Business Interruption Claims
- Cause and Origin Studies
- Expert Witness Services
- Facility Appraisals
- Feasibility Studies
- Fire and Explosion Investigations
- Insurance Services
- Litigation Support
- Market Studies
- Personal Injury Cases
- Process Reviews
- Project Management
- Project Reviews
- Property Damage Investigations
- Technical Assistance
- Technology Services

EXPERTISE:

- ☒ Petrochemicals
- ☒ Refining
- ☒ Chemical
- ☒ Process Industries
- ☒ Gas Pipelines/Terminals
- ☒ Liquid Pipelines/Terminals
- ☒ Chemicals Manufacturing
- ☒ Utilities and Energy Users
- ☒ Oil & Gas Exploration
- ☒ Environmental, Health & Safety

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