

STEANSON B. PARKS

1966 - B.S. Chemical Engineering
Oklahoma State University, OK

EXPERIENCE

1988-Present **Greene & Associates, Inc.**, Dallas, Texas - President
1974-88 **Chemical Engineers, Inc.**, Addison, Texas - President
1972-73 **Purvin & Gertz, Inc.**, Houston and Dallas, Texas - Consulting Chemical Engineer - Associate and Principal
1971-72 **The M. W. Kellogg Company**, Houston, Texas - Process Engineer
1967-70 **Sinclair Koppers Chemical Company**, Houston, Texas - Chief Process Engineer
1966-67 **The Dow Chemical Company**, Freeport, Texas - R&D Engineer, Pilot Plant Department, Texas Division

Mr. Parks' activities include the direction of engineering and consulting work for the firm. His activities center on project engineering/project management, feasibility studies, expert testimony, litigation support, insurance projects and construction projects.

Mr. Parks has worked on energy, environmental, refining, pipelining, petrochemical, engineering and construction contracts and related corporate matters. He has prepared feasibility studies for a wide variety of facilities including refineries, gas plants, petrochemical plants and chemical plants. Mr. Parks has performed market studies and research for refined products, petrochemicals, chemicals and other products. Other areas of experience include drilling operations for oil and gas, olefin (petrochemicals) plant designs, operation/maintenance, process studies, facility appraisals, project economics, project finance, fair market value determinations, property damage and business interruption claims, pipeline operations and design, evaluations for refineries, petrochemicals, natural gas plant operations, energy/utilities and cogeneration plant studies, and downstream marketing and transportation facility reviews.

Mr. Parks has consulted on many technical projects related to process technology and management aspects of refineries, gas plants, petrochemical plants and chemical plants. He has experience working on issues related to process design, operations and maintenance, process selection and engineering design matters. He has also worked on environmental, health and safety issues relating to these plants including liability matters, safety assessments and risk evaluations. In addition, Mr. Parks was involved in oil and gas operations which included drilling, production, completion and pipeline operations. He has also provided technical consulting services on matter related to plants relocation, plant processes, damage assessments, cause and origin studies, fires and explosions, and metallurgical failures.

PROFESSIONAL AFFILIATIONS

Registered Professional Engineer, Texas - #34532 (1973)
American Institute of Chemical Engineers (1966 - current)
Society of Petroleum Engineers (1973 - current)
ASTM (1979-81, current)
ASM International (The Material Information Society) (1998 - Current)
National Association of Royalty Owners (1982-1994, 2004-current)
Cherokee Nation - Cherokee Registry - C0200104



GREENE & ASSOCIATES, INC.

CONSULTING ENGINEERS

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Greene & Associates, Inc. is a Dallas area based consulting firm which serves clients worldwide providing high quality technical advisory, engineering/management consulting, litigation support and expert witness services. We provide a broad range of consulting services to law firms, insurance companies, operating companies, engineering companies, financial institutions and governmental agencies.

We specialize in these areas: OIL AND GAS, PETROLEUM REFINING, GAS PROCESSING, PETROCHEMICALS, CHEMICALS, FERTILIZERS, ENERGY AND UTILITIES, INDUSTRIAL PROCESSES, PIPELINES AND TERMINALS, ENVIRONMENTAL HEALTH AND SAFETY (EH&S), CONSTRUCTION DISPUTES, PROJECT MANAGEMENT. PROJECT INVESTMENTS, COSTS AND FINANCE, AND APPRAISALS AND EVALUATIONS.

Our consulting services and support include:

Accident Investigations	Business Interruption (Lost Profits) Claims
Cause and Origin Studies	Contracts/Bid Analysis
Construction Disputes	Economics/Investment Analysis
Environmental Assessment/Liability	Engineering/Technical Problem Solving
Facility Appraisals	Failure Analysis
Feasibility Studies	Financial Review/Analysis
Fire/Explosion Investigations	Insurance Claims
Market Studies (Pricing/Supply/Demand)	Mergers and Acquisitions
Metallurgical Problems	Plant Process/Design Review
Plant Operations/Maintenance Reviews	Personal Injury/Wrongful Death Cases
Pollution Issues/Superfund Sites	Process Reviews/Analysis
Process/Information Systems Review	Project Management/Review
Property Damage Evaluation	Regulatory Issues (EH&S)
Research Studies/Analytical Models	Safety Studies
Systems/Automation (Industrial) Analysis	Technology Development/Reviews

We assist our clients during all phases of a project, including project initiation, project scope, project data gathering and analysis, project feasibility, project studies, project specifications, project costs and estimates, project finance, project timing and schedules, process selection, project documentation, report preparation and presentations. On litigation projects, we perform data gathering, analysis and interpretation, identification of critical issues, technical and legal strategy development, calculations and analyses, expert report preparation, deposition preparation and consultation, trial exhibits preparation and trial testimony. Our consultants have assisted clients as consulting technical experts on numerous projects worldwide.

Contact: STEANSON B. PARKS, P. E.
President and Principal Consultant
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RELEVANT EXPERIENCE AND PROJECTS LIST

EXPERIENCE AND QUALIFICATIONS

G&A is a Dallas, Texas, USA area based consulting and engineering firm which specializes in working for operating companies, engineering and construction companies, law firms, insurance companies, governmental agencies and financial companies on issues concerning oil and gas, refining, petrochemical, chemical, environmental health and safety, and pipeline industries. Our expertise is in cause and origin studies, plant fire and explosion investigations, plant process studies, failure analysis, property damage investigations, economic/lost profit analysis, market economics, project feasibility studies environmental assessments, pollution liability analysis, hazard analysis, health and safety studies, and project management for the mentioned industries.

During our 30+ years of industry experience, our consultants and associates have performed technical work on several projects related to refining industries, petrochemicals, chemicals process evaluation, market economics and studies, process economics, feasibility studies, project investment analysis, project finance and other similar issues.

FACILITY APPRAISALS, EVALUATIONS AND FAIR MARKET VALUE DETERMINATIONS

Greene & Associates, Inc.'s economic and physical appraisals of petroleum refining, gas processing, chemical manufacturing and other processing facilities have evaluated:

- Investment and operating costs
- Contracts on which a project is based
- Feedstock and product markets
- Environmental/health/safety standards and compliance
- Financial requirements
- Labor conditions

The firm's studies have considered engineering and construction costs and timing; operating and maintenance requirements and practices; and shutdown and mothballing procedures. Our appraisals and surveys have been used by insurance companies and insured to determine values for new, modified or existing facilities before and after losses; tax authorities for tax valuations and investors/lenders for project assessment.

Fair market value determinations by Greene & Associates, Inc. of petroleum refineries, gas plants, transmission facilities, and chemical plants have been used by individuals and corporations for the following:

- Planning
- Allocating values

- Acquisitions and sales
- Litigation
- Arbitration
- Bankruptcy

Reports by our firm have been recognized in courts, by local and federal government agencies, and in private transactions.

MARKET STUDIES, FEEDSTOCK AND PRODUCT EVALUATIONS

The firm studies relevant national and international factors related to the energy and chemical markets. For specific projects, local and short-term adjustments are incorporated into the evaluations.

The firm monitors various feedstock and product markets, government regulations, and contract trends. It provides advice and assistance to clients in matters related to contract prices, escalation clauses, quality adjustments, etc. Our feedstock and product evaluations consider prices, volume supply and demand, location factors, and processing capabilities of the available facilities.

Projects:

- Aviation fuels distribution study
- U.S. Gulf Coast refinery requirements in the 1990's
- Propane pricing formula - U.S. East Coast Petrochemical client
- U.S. petroleum product demand projections
- Refinery feedstock pricing for Texas petroleum company
- California crude oil evaluations

FEASIBILITY STUDIES, PROJECT REVIEWS AND PROJECT MANAGEMENT

Feasibility studies and project reviews for operating companies, financial institutions, insurance companies, prospective purchasers and sellers, U.S. regulatory agencies, courts, and foreign governments have been prepared by Greene & Associates, Inc. These studies and reviews have been used in connection with:

- Research and development project evaluation
- New plants and process additions
- Plant modifications
- Insurance liability and subrogation
- Filings with the Securities and Exchange Commission
- Contract negotiations
- Mergers and acquisitions
- Project Economics
- Business Plans
- Taxation

Projects:

- Feasibility and site selection study 200,000 BPD refinery and transshipment terminal, Caribbean
- Site selection study 100,000 BPD petroleum refinery, New England
- Feasibility and site selection study 40,000 BPD petroleum refinery, Latin America
- Feasibility study methanol and LNG production, Middle East
- Feasibility study ethanol plant, Northwest U.S.
- Project review of 150,000 BPD Southeast U.S. petroleum refinery.
- Evaluation of petrochemical and chemical plants in U.S.
- Performed project investments costs and analysis, market studies and process selection studies for a Turkmenistan fertilizer plant for an investment group
- Performed feasibility study and cash flow analyses for G&A and another investment group concerning a multi-billion dollar petrochemical fertilizer complex in Mexico.
- Performed a refinery feasibility study and market studies for a Canadian investment group for a Lebanese Refinery
- Performed an investment analysis and investment proposal for a New York based investment group for a refinery in Kazakhstan
- Provided assistance to a governmental organization on issues related to refined product claims. Project involved performing calculations for various pricing data, analyzing claims and statistical analyses of crude oil and refined product pricing
- Performed an investment analysis and cost study for a financial institution buying a small Texas Refinery
- G&A performed insurance inspections and loss control studies of 200, 000 BPD refinery relocate to Daesan, Korea from Freeport, Texas, United States
- Performed pricing studies on lawsuit concerning ethylene (petrochemical) manufacturing plant in Louisiana for a Houston based law firm
- Performed pricing studies, supply demand analysis for a Chicago based law firm concerning a fertilizer plant in Louisiana concerning a plant explosion damage
- Worked as project, technical and start up advisor for Thai Olefins Company petrochemical plant
- Performed project cost studies on reconstruction of a fertilizer facility in Iowa for multiple insurance companies
- Performed a feasibility study for a Alberta Canada Fertilizer facility
- Performed evaluations for Joplin Missouri Fertilizer Complex
- Performed insurance and risk evaluations at various refineries, petrochemical plants and chemical plants for PEMEX in Mexico
- Performed project management and director of construction of large ammonia storage terminal and sulfuric acid based fertilizer complex in El Salvador
- Performed economic evaluations and prepare replacement cost estimates for refineries in Texas and Louisiana

Appraisals

Greene & Associates, Inc. has appraised:

- Far East refining complexes
- Lube oil blending plant for bank
- Northwest U.S. petroleum refineries
- Gulf Coast petrochemical plants
- Chemical plants in New Jersey and Puerto Rico

Greene & Associates, Inc. has evaluated:

- 20,000 BPD Southeast U.S. petroleum refinery
- 30,000 BPD Western U.S. petroleum refinery
- Project Economics for Mexican Petrochemical Plants
- European petroleum refinery
- International Petrochemical Projects
- Natural gas processing plants in South Central U.S.
- 60,000 BPD petroleum refinery for foreign investors
- 100,000 BPD petroleum refinery for domestic/foreign investors
- Numerous oil, gas and chemical processing and transportation facilities for a major national oil company
- Gas gathering pipeline investment, project future revenue, and recommend purchase offer
- Gas processing proposals
- Bid to purchase interests in gas plants and associated gathering systems

Greene & Associates, Inc. has made fair market value determinations for:

- U.S. Gulf Coast refineries and petrochemical complexes for tax assessment purposes
- U.S. Gulf Coast chemical plants for foreign chemical company
- Other US Refineries, Petrochemical Plants, Chemical Plants Cogeneration Facilities

Greene & Associates, Inc. has provided technical assistance to government agencies:

- Correlated petrochemical plant replacement cost with plant size
- Reviewed costs and efficiencies of power generation processes
- Evaluated lead contamination from lead smelter
- Reviewed U.S. PVC plant emissions and operating practices
- Conducted tetraethyl lead phase-out studies
- Evaluated bromine plant

- Evaluated the economic value of crude, oils and the product yield patterns for certain U.S. and European refineries as a function of crude oil feedstock.

The firm has reviewed natural gas processing:

- Proposed gas contract and recommended alternatives or modifications
- Gas plant operations - also recommended bidders for plant operator and evaluated bids
- Monthly producer payments for contract compliance

Greene & Associates, Inc. has prepared:

- Future net revenue report for pipeline company's gas processing facilities for SEC reporting

Feasibility studies and project management analysis on projects for law firms, operating companies, engineering and construction companies, financial institutions, insurance companies, prospective purchasers and sellers, U.S. regulatory agencies, courts, and foreign governments have been prepared by Greene & Associates, Inc. Our project reviews were performed for refining, petrochemical, chemical, fertilizers, gas processing, and pipelines industries. These studies and reviews have been used in connection with:

- Research and development project evaluation
- Construction Contracts and Bids Negotiations
- Construction Disputes Negotiations
- Alternative Dispute Resolutions
- New plants and process additions
- Plant modifications
- Insurance liability and subrogation
- Filings with the Securities and Exchange Commission
- Mergers and acquisitions
- Tax Evaluations

For Law Firms

- Worked on numerous refinery lawsuits concerning process, property damage and business interruption losses.
- Assisted attorneys and clients (power companies, construction companies, etc.) on several lawsuits concerning property damage and lost profits matters related to refinery outages and subsequent subrogation action.
- Worked on numerous lawsuits concerning project management.
- Worked on numerous petrochemical and chemical lawsuits related to plant fires and explosions on issues concerning process, property damage and business interruption (lost profits) losses.
- Assisted attorneys representing engineering and construction company 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 petrochemical (ethylene) plant on issues concerning plant performance, furnace design and performance, and plant automation.
- Assisted a law firm on a law firm concerning construction dispute and project management problems relating to refinery unit at one of the West coast refineries
- Hired by a governmental agency on a lawsuit related to merger and acquisitions issues of two major oil companies. We worked on issues related to west coast oil exploration and production, oil supply and demand, refiners and their refining capacities, refining products marketing, and impact of merger on the west coast markets.
- Hired by a law firm representing the E&C Company concerning an arbitration related to project delays in manufacturing pressure vessels by the vessel manufacturer and consequential damages to the overall project.

Insurance Companies and Financial Institutions

- Prepared basic feasibility studies for grass-roots facilities; physical and economic evaluations of refineries.
- Prepared investment analysis for Mexican petrochemical plant
- Prepared property damage and business interruption insurance claims; reports on insurable value for refineries, petrochemical plants and chemical plants and related facilities; environmental, health and safety audits and preparing risk assessments. Investigating the cause of accidents.
- Worked as technical advisors and project monitors on numerous insurance claims related to gas plants, refineries, petrochemical plants, chemical plants, tank farms, terminals, industrial plants and hazardous waste incineration facilities.
- Evaluating site locations, including access to pipelines, waterways, utilities, support facilities, and product markets; bids from contractors, licensors and equipment suppliers.
- Advising U.S. and foreign governmental agencies in matters involving taxes, guaranteed prices and environmental, health and safety concerns; investors during merger and acquisition of refinery assets; advising in negotiation of claim settlements.
- Representing clients at governmental hearings on matters, such as crude oil and product pricing and tax issues, presenting technical and economic facts and opinions in liability suits.
- Providing objective reviews of capital, operating, and/or maintenance costs and practices.

Project Management

We have provided project manager consulting services to various companies and firms. Additionally we acted as technical advisors and project monitors for institutions and insurance companies (on plant reconstructions). We have developed and analyzed project schedules, performed project audits, developed project budgets and estimates, identified delays in construction projects and disputes, and developed construction claims, consequential damages and lost profit claims for project delays.

Process

We have provided consulting services on matters concerning refining, petrochemical and chemical processes. These services have been used in connection with:

- Process unit problems
- Production problems
- New plants and process additions
- Feedstock selection for petrochemical facilities
- Furnace problems at Ethylene Plants
- Health and Safety issues
- Process automation
- Cause and origin for process unit failures
- Process reviews for petrochemical plants and refineries
- Plant and process modifications
- Electrical problems at refinery units
- Metallurgical problems at refinery units

ENVIRONMENTAL CONSULTING SERVICES

In addition to providing conventional environmental consulting services, Greene & Associates, Inc. also provides an advanced solution approach to your environmental problems. We do this by looking beyond the problem itself to the causes and impacts of the problem. Additionally, Greene's consultants approach the overall problem and solution from the client's perspective, in particular the impact on the financial bottom line. As problem solvers, we use our vast process industry experience to help the client first clearly define the problems and then solve them.

Greene's typical environmental consulting services on projects includes the following:

Litigation

- Provided assistance to a law firm representing a city and several plaintiffs against a major oil company on a lawsuit related to an old refinery pollution liability issues.
- Provided assistance to a law firm representing an oil and gas exploration and production on a lawsuit related to environmental (air) pollution problems.
- Provided assistance to a law firm representing a major oil company on a lawsuit related to refinery pollution problems.
- Provided assistance to a law firm representing City Government on issues related to hydrocarbon contamination of the groundwater during construction of train tunnel.
- Provided assistance to a law firm representing a major West Coast Oil Company and the company on a lawsuit related to contamination due to oil and product pipelines and historical contamination.
- Provided assistance to a law firm representing an oil company on a lawsuit related to Superfund site in determining, identifying, quantifying and characterizing wastes (hazardous and non-hazardous) from various chemical and industrial facilities in a certain geographical area.
- Provided assistance to a law firm representing a major chemical company on a lawsuit with issues concerning waste identification and characterization from different chemical and industrial facilities to a Superfund site.
- Provided assistance to law firm representing insurance companies regarding historical pollution and liabilities at a refinery.
- Provided assistance to a law firm representing a chemical company regarding pollution liability and Superfund (CERCLA) cost recovery.
- Provided assistance to a law firm representing a chemical company on a lawsuit related to economic value and processing capabilities of certain process wastes from a petrochemical facility.
- Provided assistance on a lawsuit related to environmental process equipment at an ethylene facility. In addition, worked on matters related to

Process Safety Management (PSM) and Process Hazard Analysis (PHA) issues.

- Provided assistance to a law firm representing insurance companies on a pollution liability lawsuit related to historical contamination at a tank farm.
- Provided assistance to a law firm representing an insurance company on a chemical/polymer plant fire and explosion case on matters related to cause and origin, chemical process and OSHA matters.
- Provided assistance to a law firm with a study concerning asbestos in refineries, petrochemical and chemical plants.
- Provided assistance to a law firm on issues concerning historical environmental regulations (CERCLA, RCRA, TSCA, CAA and others).

Technical/ Insurance/Economics

- Assistance in problem definition and strategies for addressing complex environmental problems followed by innovative, cost effective solutions.
- Source identification, elimination, and/or control for process unit air contaminants, wastewater, and hazardous wastes.
- Waste Minimization/Source Control, often accompanied by significant cost savings over treatment alternatives.
- Economic/benefits assessments of environmental problems and needs.
- Energy and Environmental Policy/Economics.
- Consulting assistance on current air, wastewater, hazardous waste, and groundwater/subsurface issues.
- Determination of pollution liability and related costs.
- Expert testimony with experience covering the entire history of the Environmental Movement in the U.S.A.
- Historical review of site activity, hazardous waste sites, asbestos usage, etc.
- Startup/operating assistance with treatment units, and treatment unit performance evaluation.
- Operating Procedures Review.
- Process Design/Project Management Oversight.
- Preparation of insurance claims related to pollution at petrochemical plants and chemical plants.
- Review of cleanup costs related to insurance claims and losses.
- Preparation of insurance claims related to pollution liability at a residential /commercial property.

Investigations

- Investigation of a wind turbine project site for contamination due to presence of pollutants/chemicals, which were initially suspected to be cause of foundation failures.
- Investigation of oil spills at a governmental facility.

- Investigation of chemical spill at a chemical plant after an explosion which damaged the plant and the tanks.
- Investigation of pollution related costs at an ammonia plant.
- Investigation (assessments and audits) of refineries, petrochemical plants and chemical plants to assess environmental problems.
- Investigation of hazardous waste disposal facility.
- Phase I and Phase II site investigations. Hydrogeological investigations of sites.
- Environmental, health and safety audits of PEMEX refineries, petrochemical and chemical plants.
- Environmental and safety issues related to pipelines.

Regulatory

- Assistance in facilitating negotiation and representing the client in regulatory meetings.
- Strategic guidance in complex regulatory issues and sorting out overlapping regulatory requirements.
- Overall site assessment and inspection of facilities and pollution control equipment for compliance.
- Impact of various regulations on plant operations, process economics and overall project budget
- Economic impact of various regulations.
- Development of incident/compliance tracking and reporting systems.
- Implementation and upgrading of audit systems.
- Regulatory interpretation and implementation at the plant level.
- Integration of Risk Management into management decisions to reduce long-term liabilities and costs.
- Assistance with insurance coverage issues as related to environmental management.
- Assistance in organizing and managing a corporate environmental department.
- Development and implementation of environmental policies.
- Assistance in developing and environmental management system.
- Identification of issues with respect to potential impacts on the client and strategically planning to mitigate the impact.
- Development and implementation of an accurate environmental cost accounting system. Environmental budget development.

Other Issues

- Determination of causes and effects of fires, explosions, spills and other sudden release environmental episodes.
- Due diligence for property sales and transfers.

HEALTH AND SAFETY SERVICES

Greene & Associates, Inc. also provides a full range of health and safety consulting services on matters related to refineries, petrochemical plants, chemical plants, gas plants and pipelines. Our services include the following:

Litigation

- Wrongful death cases
- Chemical exposure cases
- Benzene exposure cases
- Process equipment lawsuits related to safety aspects
- Tank farm equipment safety
- Overtime and safety issues
- Personal injury and wrongful death cases
- Plant accidents
- Refinery, petrochemical and chemical plant related occupational health and safety cases including process safety issues.
- Safety issues on fire and explosions matters.
- Gas plant safety issues.

Technical

- Accident Investigation
- Safety Engineering
- Corrosion Inspection/Control
- Electrical Codes
- Structural Analysis
- Process and Equipment Performance Evaluation
- Materials Engineering Section

Inspections and Regulatory Compliance

- Process Plant Inspections
- Asbestos Assessment/Abatement
- Electrical Safety Inspections
- OSHA Safety Compliance Inspections
- Offshore Platform Inspections
- Oilfield Construction Safety Reviews
- Safety Assessments and Audits - Process Safety Management (PSM) and Process Hazard Analysis (PHA)

Surveys/Assessments

- Safety Policy and Procedures Evaluation
- Noise Surveys
- Ventilation Surveys
- Heat Stress Assessments

Industrial Hygiene

- Accident Related Exposure Assessment
- Personnel Exposure Assessment
- Hazard Communications
- Industry Specific Evaluations
- Toxicology
- Illumination